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ORDNANCE MEMORANDA No. 29.



CAVALRY OUTFIT.

U. S. Army Military History Institute  
U. S. Ordnance Dept.

U.S. ORDNANCE MEMORANDA

No. 29.

To be added to series card

*Original*  
HORSE EQUIPMENTS

AND

(Later ed. in catalog)

CAVALRY ACCOUTREMENTS,

AS PRESCRIBED BY G. O. 73, A. G. O., 1885.

(20 plates.)



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1891.

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## SPECIFICATIONS FOR AND DESCRIPTIONS

OF

# HORSE EQUIPMENTS AND CAVALRY ACCOUTREMENTS.

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## HORSE EQUIPMENTS.

### SADDLE.

(Plates I, II, III, V, and VIII.)

Saddle is composed of { 1 Tree.  
6 Coat straps.  
2 Girth straps with 2 safes and 2 cincha straps.  
2 Stirrups (hooded).  
1 Girth (hair).  
1 Carbine boot.  
2 Saber straps.

*Saddle tree*—wood. (Plate III.)

*Pommel a* and *cantle b* (beech), each made of 2 pieces and framed together at top and glued; *2 side bars c* (poplar), each made of 2 pieces and glued together; they are then glued to pommel and cantle and secured with eight  $2\frac{1}{2}$ -inch No. 12 screws. Holes are bored through side bars along junction of pommel and cantle, front and rear; side bars are grooved underneath in line with holes for fastening on rawhide cover; 1 mortise in pommel and 3 in cantle for coat straps.

**IRON.**—1 *pommel arc d*, with 2 holes on top and fastened to side bars with 4 rivets; 1 *pommel plate e*, semi-circular, fastened to the front of the pommel with 5 rivets; 1 *cantle arc f*, with 3 holes on top and fastened to the side bars with 4 rivets; 1 *cantle plate g*, fastened to the front of the cantle with 4 rivets.

Arcs and plates 0.1 inch thick and let in flush with the wood; rivets  $1\frac{1}{4}$  inches, No. 8.

Two *stirrup strap loops h*, made of  $\frac{1}{4}$ -inch wrought iron, with the lower edges inclined from the horizontal upward and toward the front; to swing loosely in iron straps *i*, which are let in and fastened to the side bars with 3 rivets.

The tree to be smooth and well painted with white lead, and covered with rawhide to strengthen the tree; the top covering is secured in place with rawhide thongs passing through holes in front and rear of pommel and cantle and over covering.

The top and bottom covers are then sewed together with light thongs of same material.

The tree is then covered with black collar leather, 6 to 7 ounces per square foot, the seams around cantle and pommel to be reënforced with welts of leather; the seams in center of top covers to have light welts; seams on edges of side bars to be where they will not chafe the horse or rider, and to be without skirts; 4 wrought-iron saddle nails ( $\frac{1}{2}$ -inch head, japanned, 1 inch long) in side bars at points of pommel and cantle.

## TRIMMING SADDLE.

(Plates I, II, and VIII.)

Two  $1\frac{1}{4}$ -inch rings *A*, held by  $1\frac{1}{8}$ -inch staples driven in front ends of side bars and clinched.

*Shield B* with size of seat stamped on it fastened to pommel over mortise with three  $\frac{1}{4}$ -inch No. 2 screw pins; *6 guard plates or ovals C* in cantle and 1 in front of pommel over mortise, each fastened with two  $\frac{1}{4}$ -inch No. 2 screw pins; *4 foot staples D*,  $\frac{1}{4}$  inch by  $1\frac{3}{8}$  inch, for coat straps—2 on front of pommel, 2 containing  $1\frac{1}{4}$ -inch rings on rear of cantle under ovals—each fastened with two  $\frac{1}{8}$ -inch No. 6 screws; *2 foot staples E*,  $\frac{7}{16}$  inch by  $\frac{3}{8}$  inch, each fastened to side bars through rear girth straps with two  $\frac{1}{8}$ -inch No. 6 screws for attaching saddle bag; *1 saddle-bag stud F*, fastened to rear of girth strap with a  $\frac{3}{8}$ -inch No. 10 rivet, and to saddle through girth strap and cantle arc with a 1-inch No. 8 oval-head rivet. The 6 coat straps *G* are passed through mortises and foot staples, and have leather stops riveted on them  $10\frac{1}{2}$  inches from buckle with  $\frac{3}{8}$ -inch No. 12 rivets to limit their play.

*Saddle trees to be of 3 sizes*, and manufactured in the following proportions:

No. 1. Length of seat, 11 inches; 15 per cent.

No. 2. Length of seat,  $11\frac{1}{2}$  inches; 50 per cent.

No. 3. Length of seat, 12 inches; 35 per cent.

The length of side bars to correspond with the length of the seat; the other dimensions to be the same in all trees, as shown in the illustrations.

All metal parts used in trimming to be of brass.

**GIRTH.**—*Two girth straps H & H'* (harness leather) passed over pommel and cantle arcs, to which each is fastened with two 1-inch No. 8 oval-head rivets, and two  $\frac{1}{8}$ -inch No. 6 screws; the ends of the front and rear straps are sewed on both sides into wrought-iron rings *I*  $2\frac{1}{4}$  inches in diameter; safes *J* of stout leather (of pattern in drawings) are fastened to girth straps, under rings, with  $\frac{3}{8}$ -inch No. 10 rivets. *Two cincha straps K* (collar leather, 7 to 8 ounce per square foot) sewed to the rings and riveted with  $\frac{3}{8}$ -inch No. 10 rivets,  $1\frac{1}{4}$  inches in width for 3 feet 6 inches from ring, thence tapered to ends  $\frac{1}{2}$  inch wide.

**COAT STRAPS G** (collar leather, 7 to 8 ounces per square foot) with brass bar buckles and leather stops.

**CINCHA L.**—Made of hair rope, 24 strands, knotted on iron ring  $V\frac{1}{4}$  inches in diameter; to be 7 inches wide in center when finished, and to have 2 rows woven around ring and through center to connect the strands; to have stout leather circular safes *O* under rings; the knots covered with leather *V* and sewed on safes; cinchas to be made of 3 lengths in equal proportions—16, 18, and 20 inches.

**STIRRUP STRAPS M** with iron bar buckles; 1 standing loop *Q* on under side made sufficiently high to take the billet end after the strap has been passed through.

**STIRRUPS N (hard wood).** (Plates II and V.) The sole *N*  $5\frac{1}{2}$  inches wide and  $4\frac{1}{2}$  inches deep; the hood *φ* of thick harness leather with letters U. S. stamped on center of front,  $2\frac{1}{8}$

inches from bottom to center and riveted to stirrups by six  $\frac{1}{4}$ -inch No. 10 oval-head brass rivets; bottom of hood to project  $\frac{1}{4}$  inch below the plane of under side of stirrup.

**CARBINE BOOT P AND STRAPS S & S'.** (Plates II and VIII.) The *boot* of thick harness leather,  $13\frac{1}{2}$  inches in length and  $2\frac{1}{4}$  inches interior diameter at the lower end. The opening at the upper end  $5\frac{1}{2}$  inches long by 3 inches wide, shaped so as to embrace the carbine just in front of the trigger guard and have a swell pressed in the front to allow for the projection of the rear sight. A triangular piece of leather *Z* is inserted in the front of the boot to cause it to flare so as not to catch the rear sight leaf when inserting the carbine. A curved brass plate *R* made of No. 14 sheet brass is riveted on the boot to secure this shape with three  $\frac{1}{8}$ -inch No. 14 brass rivets and one  $\frac{1}{8}$ -inch No. 12 brass rivet. The boot is suspended from the saddle-bag stud by a strap *T* with 2 holes near the end for adjusting the height of the boot, and riveted to the front part of the boot on the under side with a  $\frac{1}{2}$ -inch No. 10 rivet. This strap is movable about the rivet which attaches it to the boot. The boot is fastened to the rear girth strap and girth-strap ring, off side, with two  $\frac{1}{8}$ -inch straps *S & S'* with iron roller buckles. The upper strap is fastened to the boot on the upper and under side  $3\frac{1}{2}$  inches from the top edge with two  $\frac{1}{2}$ -inch No. 10 rivets. The lower strap is fastened on the front with 1 rivet only.

**SABER STRAPS U.**—Have brass bar buckles, and 2 inches from the buckle a standing loop.

One strap is passed through ring in front of pommel on left side, and one through left girth strap ring, and then through rings on scabbard, and are used to secure the saber and limit its movements after it has been attached to the saddle by the saber attachment.

#### SADDLE BAGS.

(Plates IV and V.)

Made of bag leather, 5 to 6 ounces per square foot; composed of 2 *pouches B* with flaps (and 1 seat *D*; gusset *G* to decrease in width  $6\frac{1}{2}$  inches from ends; pouches to have detachable linings (*F*, *B*, & *G*, Pl. V.) made of No. 9 drab duck, secured in place with 4 metallic buttons, the off side for clothing and the near side for rations, with inside pockets *P* for knife fork, and spoon, and 3 small bags *S* for coffee and sugar and *R* for salt. The material for these bags is shown on Plate V, ready cut, with lines of folds and stitching for hems and seams marked in dotted lines thereon, making the salt bag *R* when finished  $3\frac{1}{2}$  inches wide and  $7\frac{1}{2}$  inches long, and the coffee and sugar bags *S*  $5\frac{1}{2}$  inches wide and  $5\frac{1}{2}$  inches long. A cord 20 inches long is run through hems of each for tying. A flap *C*, with U. S stamped on it, to cover each pouch, and secured by 3 brass buckles and billets *E*, and to have a  $\frac{1}{8}$ -inch No. 12 brass rivet in each upper corner riveted through pouch and seat. The seat of the saddle bags  $17\frac{1}{2}$  inches long at the rear, 18 inches at the front, and  $3\frac{1}{2}$  inches wide in the middle; to fit smoothly over cantle arc and side bars of the saddle; to have one hole *L* for the saddle-bag stud and 2 slots *M* for foot staples; 2 key straps *K* riveted to the seat to pass through staples on saddle.

## SADDLE BLANKET.

(Plate XI.)

Made of pure wool, close woven, of stout yarns of a gray color, with a yellow border 3 inches wide, and 3 inches from the edge; the letters U. S., 6 inches high, of yellow color, in the center of the blanket. Dimensions, 84 inches long, 72 inches wide. Weight, 4 pounds, with 26 threads in the warp and 36 per inch in the woof. Will stand a strain of 50 pounds in the direction of the warp and 40 pounds in the direction of the woof.

## SURCINGLE.

(Plate VIII.)

Of blue linen webbing *W*, 3½ inches wide; a 1½-inch iron roller buckle *B* with chape and standing loop on one end; 2 leather loops *C* sewed on web to take the billet; a 1½-inch billet *D* with swell sewed on the other end and reinforced with leather.

## CURB BRIDLE.

(Plate VI.)

Made of black bridle leather.

*HEADSTALL* composed of *one crown G*; the ends split 8 inches, ¼ inch taken out of the center, forming a cheek and throat strap billet on each end.

*Two cheek pieces H* with brass bar buckles sewed in the upper end and billets and brass bar buckles to the lower end of each.

*One throat latch K* with brass bar buckles at each end.

*One brow band J*, 2 brass ornaments, one riveted on each side through slit in crown piece.

*Reins L* made of 2 pieces of leather sewed together in the center; billets *L'* and brass bar buckles on ends.

*Curb bit of Shoemaker pattern*, of good shear steel, bright finish; *2 branches B*, 4.9 inches apart at lower ends and at mouth piece, 5.3 inches at top of curve of upper part of branch, with curve at top for cheek piece billets, and slot in the branch for curb strap *N*; center of slot 1.75 inches from center of mouth piece; lower part of branch 5.1 inches long, with eye at lower end into which is welded a ring for the reins; *1 mouth piece M* 0.6 inch in diameter, securely riveted to the branches; *1 cross bar C* securely riveted to the branches near the lower end; *2 ornaments of cast brass D*, the letters U. S. raised thereon, riveted to the branches over ends of mouth piece.

The width of arch of mouth piece is 1.9 inches for all bits.

There are three grades of severity for the bit, determined by the height of the arch of mouth piece *M*.

No. 1. Height of arch, ½ inch.

No. 2. Height of arch, 1 inch.

No. 3. Height of arch, 1½ inches.

They are manufactured and issued in the following proportions, unless otherwise called for :

- No. 1. 75 per cent.
- No. 2. 20 per cent.
- No. 3. 5 per cent.

*Curb strap N*, composed of 1 safe *S*, on which is sewed a strap, the ends forming billets; 2 brass bar buckles sewed between safe and strap  $2\frac{1}{4}$  inches from each end of safe.

#### WATERING BRIDLE.

(Plate VI.)

Is composed of a bit and a pair of reins (bridle leather).

*The bit* consists of a steel mouth piece *A* jointed in the middle, with holes drilled in the ends, into which are welded two  $2\frac{1}{8}$ -inch rings *E*; also 2 snap hooks *F* for attachment to the halter.

*The reins R* are in two pieces, sewed together in the center, the ends sewed into the rings of the bit.

#### LINK.

(Plate VI.)

A *strap T* (made of collar leather  $8\frac{1}{2}$  to 9 ounces per square foot), with a snap hook sewed in one end, and to the other a brass bar buckle and billet *Q* with sliding loop; its length will be adjusted by the billet to fit snugly the cheek piece of the bridle, being buckled in the rear rein ring of the bit and held by the snap in the upper buckle of the cheek piece.

#### HALTER.

(Plate VII.)

Composed of 2 *cheek pieces A* (made of harness leather); one end of each cheek piece is sewed to a rectangular iron loop *B*, and the other end sewed to an iron ring *C*  $1\frac{1}{4}$  inches diameter.

*The crown piece D* is sewed to the off cheek ring; iron bar buckle *E* and chape sewed to the near ring.

*Nose band F*, with ends sewed to rectangular loops *B*.

*The chin strap G*, with iron bar buckle *H*, 2 standing and 2 sliding loops, passing loosely through rectangular loops *B* and halter swivel rings *I*.

*Throat strap J*, folded on itself, making 3 thicknesses and forming at the top a loop for the throat band to pass through, and embracing in its fold at the other end a bolt which holds the ring of the halter swivel.

*Throat band K* passes through loop in throat strap *J* and is sewed to cheek ring. Ring of swivel *I*  $1\frac{1}{4}$  inches diameter. Square *G*,  $1\frac{1}{8}$  inches wide, to which halter strap or lariat can be attached.

*Halter strap L*, with iron bar buckle without tongue sewed to one end and double on itself 6 inches.

## LARIAT.

(Plate IX.)

Of linen plaited rope *C*, glazed, 25 feet long (finished) and  $\frac{1}{8}$  inch diameter. At each end is an iron ring *A*  $1\frac{1}{4}$  inches in diameter, with a snap hook *B*. The rope *C* is attached to the rings by a bowline knot. The loose end is then tucked back through the knot and bound with copper wire.

## PICKET PIN.

(Plate VII.)

Of pattern known as the *Lyons* patent.

*The pin X* to be 15 inches long, made of  $\frac{1}{8}$ -inch round iron, and the head stout enough to resist upsetting by being struck.

*The swivel and ring S* to be of the pattern and dimensions indicated in plate; to be painted black.

## SIDE LINE.

(Plate IX.)

Made of harness leather.

Two varieties of side lines are manufactured and issued, according to the conditions of service or the preference of troop commanders.

*Butler & Varney*, composed of 2 leglets *D* with tinned fastenings, the lay containing in one end the hook *E* of the fastening, and in the other the hasp *G*; the chape *K* containing the iron *D* ring *H* of the chain *M*  $1\frac{1}{8}$  inches in diameter.

*Comly*, composed of 2 leglets *N* with  $1\frac{1}{2}$ -inch iron roller buckles *O* in folds *P* of the lays *R* on one end, the other end forming a billet. The  $1\frac{1}{8}$ -inch *D* ring *S* of the chain *T* is blocked in place by 2 pieces of leather and sewed between the lay and fold, and riveted with two  $\frac{1}{8}$ -inch No. 10 tinned iron rivets.

In both patterns of side lines the leglets are connected by a chain made of  $\frac{3}{16}$ -inch iron; links  $\frac{1}{8}$  inch by  $\frac{1}{8}$  inch, with swivel at middle.

The side lines are made in equal proportions, viz :

- No. 1. Length of chain, 18 inches.
- No. 2. Length of chain, 24 inches.
- No. 3. Length of chain, 30 inches.

## HORSE COVER.

(Plate X.)

Of No. 8 white cotton duck, the curve in the back made by straining the straight edge to a curved line; 2 reënforces *A* sewed on each front side of cover; leather billets *B* sewed to the 2 on the off side, and the chapes *C* with standing loops and iron roller buckles on the 2 on the near side.

*Crupper D.*—A rope covered with drab web and sewed to the inside of the cover under reënforces.

*Surcingle E.*—Four inches wide, of cotton duck, doubled and sewed on the outside of cover, the ends passing through slits reënforced with cotton web, to the inside of cover; a 1½-inch iron roller buckle *F* with chape and loop sewed on off side; billet *G* with a swell sewed on near side.

#### NOSE BAG.

(Plate VII.)

Of No. 8 white cotton duck, with a flexible leather bottom *M* 6½ inches in diameter, 3½ inches deep; body hemmed on top and sewed to the bottom with 2 rows of stitching; on the off side a head strap *N* sewed to the body and riveted to the bottom; on the near side a strap *S* is fastened in the same manner, with an iron roller buckle *P* and standing loop.

Both straps are riveted to top of body and reënforced.

The sides, through straps, are perforated with ¼-inch holes, ½ inch apart; also through bottom, 1½ inches from the top, 3 inches apart. The letters U. S., 1½ inches long, stencilled on the body.

#### HORSE BRUSH.

(Plate VII.)

*Body Q* oval in shape, 4½ inches by 9 inches; of stout leather, with Russia bristles the letters U. S. stamped on leather hand strap *R*.

#### CURRY COMB.

(Plate VII.)

*Body U* of 2 thicknesses of stout leather, 4¾ inches by 5 inches; sides slightly curved 4 double rows of iron teeth *T* (one with knocker *V*, projecting ⅛ inch beyond body), each row riveted to the body by 3 iron rivets. Letters U. S. stamped on hand strap *W*.

#### SPURS.

(Plate IX.)

Of cast brass, smooth finish, with ¾-inch bar loop on side for spur straps *F*, with steel rowels  $\frac{27}{32}$  inch diameter.

#### SPUR STRAPS *F*.

(Plate IX.)

Made of collar leather, 7 to 8 ounces per square foot, with brass wire buckles and standing loop.



## CAVALRY ACCOUTREMENTS.

### CARBINE SLING AND SWIVEL.

(Plate XV.)

Of black collar leather *Q*, 8½ to 9 ounces per square foot, with brass bar buckle *A* and tip *B*.

*Swivel D* of iron with *D* and roller; link *H* and hook *H'* of iron; guard spring of steel.

### SABER BELT AND PLATE.

(Plate XV.)

Of black collar leather *E*, 7 to 8 ounces per square foot, with one sliding loop; to have 1 slide *G* of cast brass with loop at lower part for attaching hook of saber attachment; 1 saber hook *H*, ½ inch wide at point,  $\frac{7}{16}$  inch at butt, made of No. 14 sheet brass, bearing around loop on slide; slide to be free and move on belt. A flat brass hook is riveted to one end of the belt to regulate its length.

A hasp *K* of cast brass is sewed and riveted in the other end of belt to connect with plate.

Saber belt plate *F* of cast brass, rectangular,  $3\frac{3}{8}$  inches long,  $2\frac{1}{8}$  inches wide, with slot on one end to receive the belt; hook on under side.

In relief, on face of plate, the letters U. S., surrounded by an oval.

Saber belts are made of two lengths, 38 inches and 42 inches, equal quantities to each length.

### SABER ATTACHMENT.

(Plate XV.)

(A modification of the *Stuart* attachment.) Is made of collar leather, 7 to 8 ounces per square foot. Has a brass plate *L* with hook; slots in plate for 2 slings *M* & *M'* one end riveted in the slots, the other end with 2 holes with slits for 2 brass studs and slide loops.

### PISTOL HOLSTER.

(Plate XIV.)

Of black collar leather, 8½ to 9 ounces per square foot, composed of body *P*, flap *frog A*, and bottom *K*, and made so that the pistol shall fit neatly into it; to have the letters U. S., surrounded by an oval, stamped in front. A brass button riveted on body, the back on the inside covered with leather and stitched in place; seam at top of body reënforced.

A circular bottom with hole punched in center, sewed in flush with bottom of holster. Flap to be sewed and riveted to the back of the body; to have 2 holes with slots for attaching to the button, permitting the use of holster for carrying either the Colt's or Schofield, Smith & Wesson revolver.

The frog for the belt is sewed and riveted to the flap and body, and is large enough to slip over the empty woven cartridge belt.

#### WOVEN CARTRIDGE BELT.

(Plate XV.)

*The belt O* is of a uniform gray color. At the left-hand end is sewed a black leather chape *C*, embracing in its fold a brass bar buckle *J* and the belt. At the right-hand end a billet *N* with a leather lining. The chape and billet, where joined to the belt, to be of its full width, then abruptly narrowed down to 1½ inches and placed close to the cartridge loops *P*. On the left side of the belt a chape with brass loop and hook *R* for the saber attachment, 6½ inches from the end of the buckle chape. The belt to be manufactured in 2 sizes, and issued to troops in equal proportions, unless otherwise called for.

No. 1, with 45 loops.

No. 2, with 50 loops.

Dimensions of billet shown on plate. Lengths of the woven belts vary.

#### CARTRIDGE BOX.

(Plate XIV.)

The *McKeever* cartridge box, made of black collar leather, 8½ to 9 ounces per square foot, is made in 2 parts *B* & *D*, connected by a leather hinge working over a brass rod *E*, which passes through the ends of the box and is secured by a brass oval riveted on each end. A swell *F* & *F'* is pressed in the right-hand end of the box for carrying a screw-driver.

A brass button *G* is riveted on front *D* of box, and a billet *H* with a slitted hole on back *B* for closing box.

*Two waist belt loops L* riveted and sewed on back of box.

The cartridges are held in webbing loops sewed to a drab duck bellows, 10 in each section of the box. The bellows allow the cartridges to incline forward when the box is open. The letters U. S., surrounded by an oval, stamped on front of box.

#### SABER KNOT.

(Plate XIV.)

*Sling M*, made of light collar leather, to be soft and pliable, ends passed through loop *N* on tassel *O*; ends sewed together and hole punched and slit for button.

*Tassel O* of light collar leather, slit and rolled up to ¼ inch diameter; wrapped with

waxed thread to the width of  $\frac{1}{16}$  inch from top for braiding over. The loop is then sewed on, after which it is again wrapped with waxed thread to  $\frac{1}{8}$  inch diameter.

*Braiding strip* of light collar leather, braided on the wrapped thread on end of the tassel.

*Slide loop Q* braided over with strips of light collar leather.

*Button loop R*, of light collar leather, punched and slit for a button.

#### CANTEEN.

(Plate XV.)

Made of XXXX tin, circular in shape,  $7\frac{1}{2}$  inches in diameter, sides oval and smooth; thickness through, 3 inches; with a triangular iron wire loop *T* soldered on each side to tin loop; mouth piece with a rim; cork capped with tin; iron wire stem riveted through cork and attached to canteen by a brass chain 3 inches long, with a ring closed on mouth piece.

Covered first with gray Petersham and afterwards with drab duck.

#### CANTEEN STRAP.

(Plate XV.)

Of black collar leather *U*, 7 to 8 ounces per square foot, with iron roller buckle and 2 standing loops on one end; 1 sliding loop *V*; snap hook *W* sewed and riveted on leather loop, movable along the double strap for attachment to ring on saddle or to loop on cartridge belt.

#### HAVERSACK.

(Plate XIII.)

Of No. 9 drab duck. The flap *H* is made in 2 thicknesses, cut  $14\frac{1}{2}$  inches deep by  $12\frac{1}{2}$  inches wide, and bound with 1-inch wide drab webbing.

A double webbing strap *A* 9 inches long by  $\frac{1}{4}$  inch wide, with 2 eyelets, is sewed to the under side of flap.

The front *F* is cut 12 inches deep by  $9\frac{1}{2}$  inches wide; it has an outside pocket *P* for meat can and plate combined, cut  $11\frac{1}{2}$  inches deep by  $9\frac{1}{2}$  inches wide, rounded at bottom, with selvage top; is seamed in with the front and gusset, and felled through all.

Gusset *G* is cut  $31\frac{1}{2}$  inches long by  $3\frac{1}{2}$  inches wide in middle and  $3\frac{1}{2}$  inches at ends; tapers 5 inches from ends; a brass wire buckle *B*  $\frac{1}{4}$  inch wide with web chape *C* is sewed to the center.

An inside pocket *J* with selvage top, cut 11 inches deep by  $9\frac{1}{2}$  inches wide, sewed in with the back.

Back *E* cut 12 inches deep by  $10\frac{1}{2}$  inches wide at top,  $9\frac{1}{2}$  inches wide through middle; 2 web chapes *I* with brass D's "D" sewed on back for attaching the haversack strap

Two inside pockets *K* & *K'*, hemmed at top and sewed in with sides and across bottom.

to gusset, cut 9 $\frac{1}{2}$  and 8 $\frac{1}{2}$  inches long by 3 $\frac{1}{2}$  inches wide; to taper with the gusset and set in 1 inch from top, on line with inside pocket, for knife, fork, and spoon.

*Mouth of haversack bound with 1-inch drab webbing,  $\frac{3}{8}$  of an inch included in the measurements for all seams.*

#### HAVERSACK STRAP.

(Plates XIII and XV.)

Of black collar leather *X*, 7 to 8 ounces per square foot, 2 inches wide in middle, tapering to 1 $\frac{1}{2}$  inches at ends; 2 *double brass wire hooks Y*, with rollers in fold; 2 *brass hooks*; 2 *sliding loops*.

#### MEAT CAN AND PLATE.

(Plate XIV.)

*Meat can and plate combined* consists of 2 oval dishes *W* & *W'*, made of XXXX tin, one deeper than the other, which fit together, forming a meat ration can of the following dimensions: Length, 8 inches; width, 6 $\frac{1}{2}$  inches; depth of whole can, 1 $\frac{1}{2}$  inches when closed.

The lower dish to be 1 inch in depth and the plate  $\frac{3}{4}$  inch in depth. To the deeper dish or plate is attached a light iron handle *J*, which folds over and fastens the two parts together when closed.

#### TIN CUP.

(Plate XIV.)

Made of XXXX tin; 4 inches high, 4 inches in diameter; a tin handle, 1 inch wide at top, tapering to  $\frac{1}{2}$  inch, riveted on side.

#### KNIFE, FORK, AND SPOON.

(Plate XIV.)

*Knife and fork* are made of steel; handles japanned.

*The spoon* is made of tinned iron.

Dimensions shown on plate.

Leather sheaths, S for knife, T for fork, made of scrap leather, as shown in plate.

#### GUIDON STIRRUP.

(Plate XIV.)

(Stirrup with hood; same specifications as given for stirrup under saddle.)

*Socket W* of stout leather, 6 inches long, 1 $\frac{1}{2}$  inches in diameter, inside measure, to be attached to hood by two  $\frac{5}{8}$ -inch straps.

*Top strap X* sewed around socket, the ends reënforced, sewed, and riveted to hood.

*Bottom strap X'* sewed around socket and riveted to socket and hood.

## SADDLE CLOTHS.

(Plate XII.)

*For officers of the general staff and staff corps.*

To conform in dimensions to the standard sample (see plates). To be made of dark-blue cloth, known to the trade as "*F and H Castor*," fifty-four (54) to fifty-five (55) inches wide, weighing about twenty-three (23) ounces to the lineal yard, and to be capable of standing a breaking strain of forty-four (44) pounds to the inch of warp, and fifty (50) pounds to the inch of filling; the dye to be strictly fast.

To have an inner lining of brown buckram and an outer lining of heavy black enameled cloth.

To be made in 2 halves and then neatly joined and held securely together by a strap *A* of black bridle leather one and one-quarter (1 $\frac{1}{4}$ ) inches wide, placed in the seam and stitched through the whole thickness of cloth and lining.

Each half to have a horizontal slit seven and a half (7 $\frac{1}{2}$ ) inches long near the center of same; the slit on under side to be faced with a piece of bridle leather ten (10) inches long and four (4) inches wide, and rounded at the corners; stitched to the linings; the cloth edges of slit to be bound around with black enameled leather stitched through all.

The saddle cloth to be bound all around the edge with black enameled leather, to show on the outside a width of one-half ( $\frac{1}{2}$ ) inch, and to be trimmed with gold lace one (1) inch wide, next the enameled leather; in each flank corner the insignia as prescribed for the forage cap, embroidered on an oval of dark-blue cloth, is sewed to the saddle cloth in the position shown on plates XVI to XX, inclusive.

## SADDLE CLOTHS FOR OFFICERS OF THE LINE.

To be of dark-blue felt, known to the trade as number "XO," of good wool stock and fast dye, seventy-two (72) inches in width, and weighing about two and one-half (2 $\frac{1}{2}$ ) pounds to the linear yard. To be capable of standing a breaking strain of at least sixty (60) pounds to the square inch. To be made in 2 halves, which are neatly and securely seamed together.

The saddle cloth to be bound all around the edge with cloth, to show one and one-half (1 $\frac{1}{2}$ ) inches on outside, *white for infantry, scarlet for artillery, yellow for cavalry*.

The number of the regiment in figures two (2) inches in length, made of cloth of the same color as trimmings, to be placed on each of flank corners, in the position indicated on Plate VII.

*Dimensions of leather parts of horse equipments.*

Plate.	Figure.	Letter.		ARTICLES.				Number.	LENGTH.			BUCKLES.	
						Width.	Cut.		Length.	Number.	Width.		
I	H			Girth straps	Front	1 1/4	43	38					
I	H'				Rear	1 1/4	44	39					
VIII	4	J		Girth strap safes		2	5 1/3	5	5				
I	K			Cincha straps		2	1 1/4	60	57 1/2				
I	G			Coat straps		6	5/8	35	33	6	5/8		
II	M			Coat strap stops		6	5/8	5/8	5/8				
II	Q			Stirrup straps		2	1 3/8	56	53	2	1 3/8		
V	Φ			Stirrup strap loops		2	1 1/4	5	1 3/8				
VIII	2	O	Saddle	Stirrup hoods		2	14 7/8	9 7/8	9 7/8				
VIII	2	V		Cincha safes		2	6 1/2	6 1/2	6 1/2				
II	U			Cincha covers		2	7 1/4	3 7/8					
VIII	1	P		Saber straps		2	5/8	15	12	2	5/8		
VIII	1	T		Saber strap loops		2	1/2	2 1/4	5/8				
VIII	1	S			Body	1	12	13 5/8	13 5/8				
VIII	1	S'			Gusset	1	2 1/2	1 1/2					
				Carbine boot	Suspension strap	1	7/8	17	17				
					Top strap	1	7/8	19	17	1	7/8		
					Bottom strap	1	7/8	15 1/4	13 1/2	1	7/8		
					Top and bottom strap loops	2	5/8	2 3/4	7/8				
IV	D			Seat		1	10	19 1/4	18				
IV	K			Key straps		2	3/4	3	3				
IV	F			Front		2	12	11 1/4	11				
IV	B			Back		2	12	12 1/4	12				
IV	G			Gusset		2	4 1/2	25 5/8	25 5/8				
IV	C			Flap		2	13	8	8				
IV	E			Flap billets		6	3/4	13	13				
IV	H			Chapes		6	3/4	3 1/2	1 7/8	6	3/4		
			Saddle bags	Chape reinforce		6	1	19/4	19/4				
IV	W			Chape loops		6	1/2	2 1/2	3/4				
IV	V			Welts, long		2	5/8	31					
				Welts, short		2	5/8	26 1/2					
V	1	F			Front	2	12	12 1/8	11				
V	1	B			Back	2	12	12 1/2	11 3/8				
V	1	G			Gusset	2	4 1/2	26	25 1/8				
V	1	P			Pockets	2	4 1/2	9 1/8	8				
V	1	S			Sugar and coffee bags	2	11	7 1/4	5 3/4				
V	1	R			Salt bags	1	8	9	7 1/2				
VIII	3	W			Webbing	1	3 1/2	50	50				
VIII	3	C			Loops	2	3/4	3 7/8	3 1/2				
VIII	3	D	Surcingle		Billet	1	2 1/4	30	30				
VIII	3	A			Billet reinforce	1	2 3/4	4	4				
					Chape	1	2 1/8	7	4 1/4	1	1 1/2		
					Chape loop	1	3/4	4	1 1/2				
VI	1	G			Crown piece	1	1 1/2	26	26				
VI	1	H			Cheek pieces	2	3/4	12	9 3/4	4	3/4		
VI	1	H'			Cheek billets	2	3/4	10 3/4	10 3/4				
VI	1	J			Brow band	1	3/4	22	15 3/4				
VI	1	K	Curb bridle		Throat latch	1	5/8	21 1/4	17 1/2	2	5/8		
VI	1	L			Reins	2	7/8	60	60	2	7/8		
VI	1	L'			Rein billets	2	7/8	13	13				
VI	1	N			Curb strap	1	5/8	20 1/2	20	2	5/8		
VI	1	S			Curb strap safe	1	1 1/4	7 1/4	7 1/4				
VI	3	B	Watering bridle—reins			2	7/8	60	57 1/2				

*Dimensions of leather parts of horse equipments—Continued.*

Plate.	Figure.	Letter.	ARTICLES.	LENGTH.			BUCKLES.	
				Number.	Width.	Cut.	Finished.	Number.
				In.	In.	In.	In.	In.
VI	2	T	Link	1	3/4	16	11 1/4	1
VI	2	Q		1	3/4	12	12	
VII	2	D		1	1 1/8	27 1/2	25	
VII	2	A		1	1 1/8	8 1/2	3	1
VII	2	K		2	1 1/4	13 1/4	8 1/2	
VII	2	F	Halter	1	1	23	18	
VII	2	G		1	1 1/4	18 1/2	13 1/2	
VII	2			1	1 1/8	40	37	1
VII	2			2	7/8	3 1/2	1 1/8	
VII	2			2	7/8	4 5/8	1 1/8	
VII	2	J		1	1 1/4	17	6 1/8	
VII	2	L		1	1 1/8	87	81	1
IX	4	C	Lariat rope	1	3/8	318	300	
IX	1	R		2	1 1/2	20 1/4	17 1/2	2
IX	1	P	Side lines—Comly	2	3 1/8	11 5/8	11 5/8	
IX	2	K		2	1	4	1 1/2	
IX	2	L	Side lines—Butler & Varney	4	1 1/2	2	2	
IX	2	F		2	1 5/8	7 1/4	5	
X	B			2	1 1/8	17	12	
X	C			2	2	14 5/8	14 5/8	
X	A			2	1	14	14	
X	G			2	1	4	2 1/4	
X	H			2	3/4	3	1	
			Horse cover	4	3 1/2	3 1/2	3 1/2	
X	K			4	4	4	3 1/2	
X	S			4	2 1/4	18	18	
X	E			1	2 1/2	4 1/4	4 1/4	
X	P			1	2 1/8	7	4	
				1	3/4	4	1 1/2	
X	D			1	3/4	4 1/8	4	
VII	1	N		2	2 1/2	2 1/2	2 1/2	
VII	1	S	Nose bag	2	3	3	2 1/2	
VII	1	M		2	36	77 1/2	76	
VII	1	O		1	9	70	68	
VII	5	Q		4	1 1/2	5 1/4	5 1/4	
VII	5	R	Horse brush	8	1 1/2	2 1/2	1 1/2	
VII	4	U		Crupper	1	1/4	31 1/2	31 1/2
VII	4	W	Curry comb	1	1 1/4	33	33	
IX	3	F	Spur straps	1	1 1/4	54	54	
			Spur strap loops	1	1 1/4	3 1/4	3 1/4	
XV	3	Q	Carbine sling	1	1 1/4	18 3/4	15	
XV	2	E	Saber belt, long	1	3/4	3 3/4	1 1/4	
XV	2	E	Saber belt, short	1	12 1/2	12 1/2	3 1/2	
				1	32 1/2	15	13 3/4	
				2	4 1/2	9	9	
				1	2	7	4 1/2	
				2	5	4 3/4	4 3/4	
				1	1 1/8	7 1/2	5	
				2	3/4	21 1/2	19 1/2	2
				1	1 1/2	62 1/2	60	1
				1	1 1/8	44	42	
				1	1 1/8	40	38	

*Dimensions of leather parts of horse equipments—Continued.*

Plate.	Figure.	Letter.	ARTICLES.	Number.	LENGTH.			BUCKLES.	
					In.	Width.	Cut.	Number.	Width.
					In.	In.	Finished.		In.
XV	5	M	Sliding loop	1	1/4	6 1/2	1 1/8		
XV	5	M'	Saber attachment	1	3/4	28	28		
XV	5			1	3/4	14	14		
XIV	1	P		2	2 1/4	3 1/4	3 1/4		
XIV	1			1	9 1/4	11 1/2	11 1/2		
XIV	1	C	Pistol holster	1	3/4	1 1/2	1 1/2		
XIV	1	A		1	3 1/2	8 1/2	8 1/2		
XIV	1	K		1	3 1/2	9 1/2	5 1/4		
XV	1	N		1	1	1	1		
XV	1			1	3	14 1/2	14 1/2		
XV	1	C	Cartridge belt	1	3	1 1/2	1 1/2		
XV	1	S		1	3	1 1/2	1 1/2		
XIV	2	M		1	3	3 1/2	1 1/2	1	1 1/2
XIV	2	O		1	5/8	30 1/2	15 1/4		
XIV	2	N		1	3 1/2	15			
XIV	Q		Saber knot	1	1 1/8	2 1/2			
XIV	R			1	1 1/8	45			
XIV	3	D		2	1/2	2			
XIV	3	B		2	1/8	26			
XIV	3			1	5/8	3	3		
XIV	3	H		1	6 1/2	4 3/4	4 3/8		
XIV	3			1	6 1/4	4 1/8	4 1/8		
XIV	3			2	3/4	4 3/8	3 3/8		
XIV	3			1	1 1/8	3 1/4	3 1/4		
XIV	3			1	6	2	2		
XIV	3			1	1 1/2	4 1/8	4 1/8		
XIV	3	F	Cartridge box	1	2	4 3/8	4 1/4		
XIV	3			1	1 1/4	4	4		
XIV	3	F'		1	1 1/4	4 1/4	4		
XIV	3			1	6 1/4	2 1/2	2 1/8		
XIV	3			1	6 1/4	3 1/4	2 1/8		
XIV	3			1	6 1/4	2	1 1/8		
XIV	3			1	6 1/4	3 1/2	2 1/8		
XIV	3	L		2	1 1/4	14 3/4	6		
XV	6	U		1	5/8	32	30	1	5/8
XV	6	V		1	7/8	3 1/2	5/8		
XV	6		Canteen strap	1	1/2	3	5/8		
XV	6			2	1/2	2 1/4	5/8		
XV	4	X	Haversack strap	1	2	56	56		
XV	4		Sliding loop	2	1/2	4 1/2	1 1/8		
XIV	4	U		1	14 1/8	9 7/8	9 7/8		
XIV	4	W		1	5 1/2	6	6		
XIV	4	X	Guidon stirrup	1	5/8	12	4 1/2		
XIV	4			1	5/8	2 1/2	2 1/2		
XIV	4	X'		1	5/8	7	3 5/8		

## CARBINE BOOT AND STRAPS.

(Plate VIII.)

The boot *P* of thick harness leather,  $13\frac{1}{2}$  inches long and  $2\frac{1}{4}$  inches interior diameter at the lower end. The opening at the upper end  $5\frac{1}{2}$  inches long by 3 inches wide shaped so as to embrace the carbine just in front of the trigger guard, and have a swell pressed in the front to allow for the projection of the rear sight. A triangular piece *Z*, leather, is inserted in the front of the boot to cause it to flare, so as not to catch the rear sight leaf when inserting the carbine. A curved brass plate *R*, made of No. 14 sheet brass, is riveted on the boot to secure this shape with three  $\frac{1}{8}$ -inch No. 14 brass rivets, and one  $\frac{1}{8}$ -inch No. 12 brass rivet. The boot is suspended from the saddle-bag stud by strap *T*, with two holes near the end for adjusting the height of the boot, and riveted to the front part of the boot on the under side with a  $\frac{1}{2}$ -inch No. 10 rivet. This strap is movable about the rivet which attaches it to the boot. The boot is fastened to the rear girth strap and girth-strap ring, off side, with two  $\frac{1}{8}$ -inch straps, *S* and *S'*, with iron roller buckles; the upper strap *S* is fastened to the boot on the upper and under sides  $3\frac{1}{2}$  inches from the top edge with two  $\frac{1}{2}$ -inch No. 10 rivets; the lower strap *S'* is fastened on the front with one rivet only.

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## **ILLUSTRATIONS**

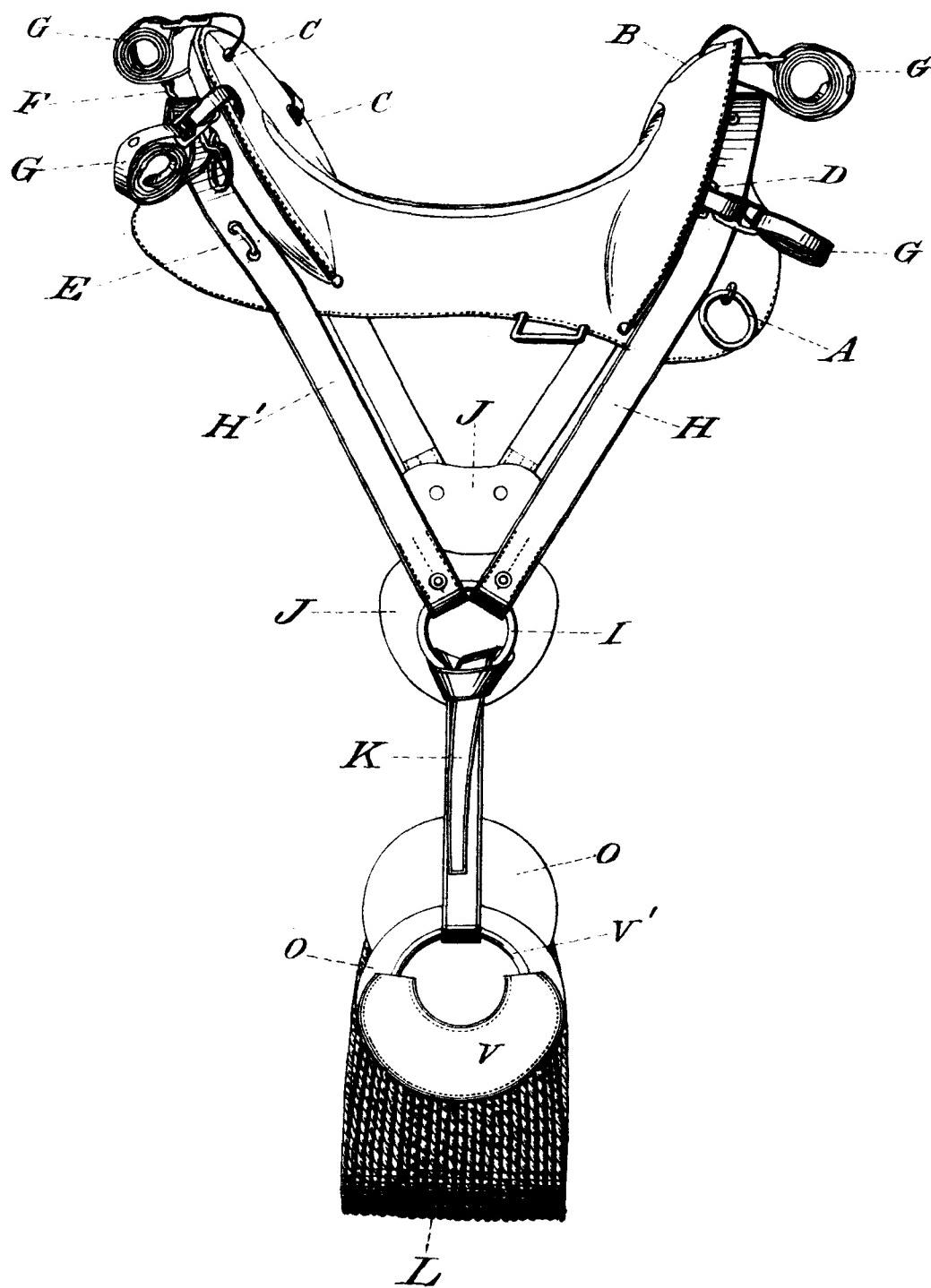
**ACCOMPANYING THE**

# **ORDNANCE MEMORANDA No. 29**

## **CAVALRY OUTFIT.**

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— SADDLE WITH CINCHA —



— SADDLE - TREE. TRIMMED. —

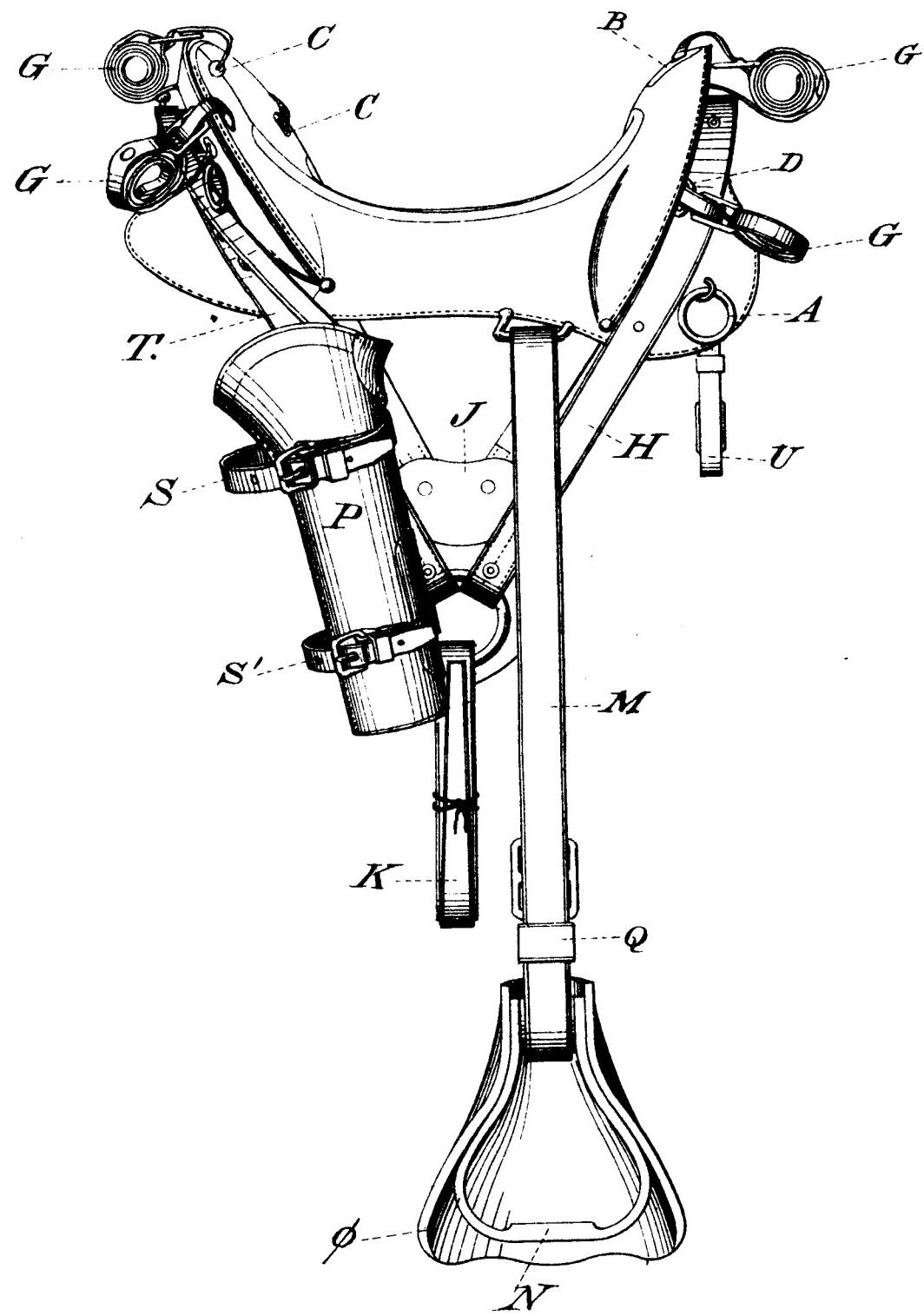
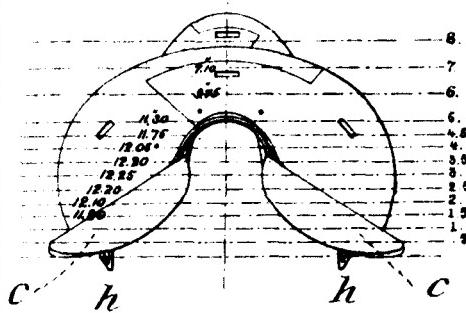


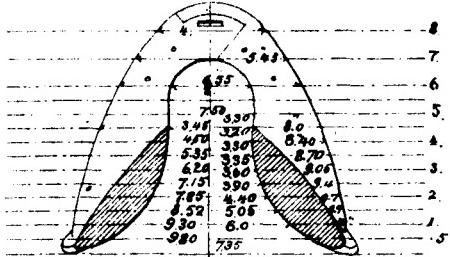
PLATE III.

— SADDLE - TREE .— DETAILS —

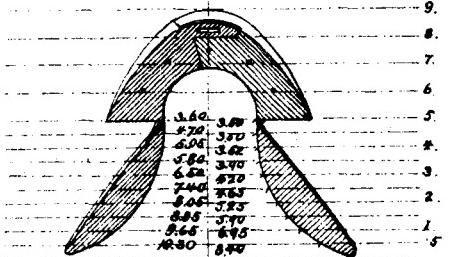
— REAR ELEVATION .—



— SECTION ON BB' .—



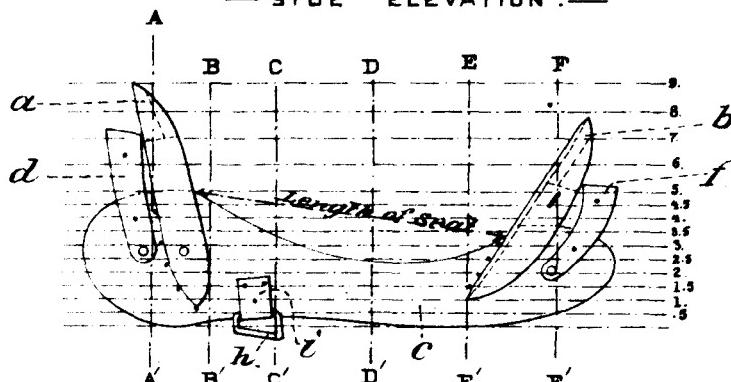
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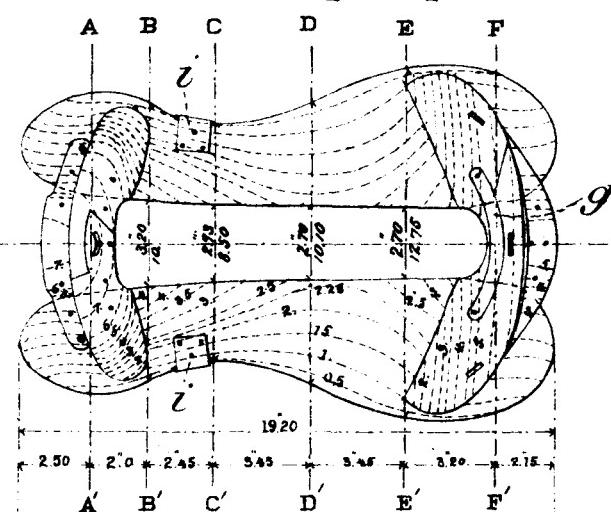
— SECTION ON CC' .—



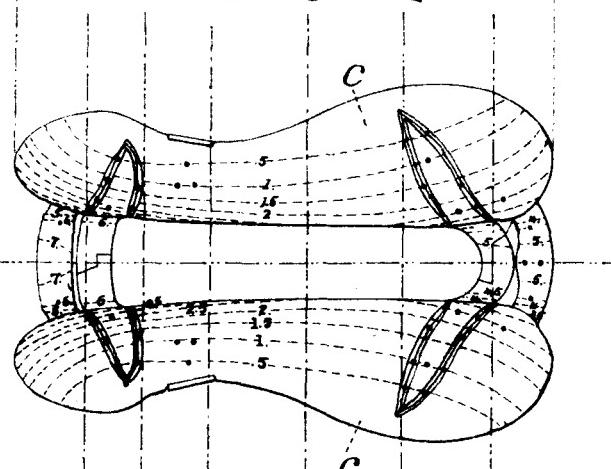
— SIDE ELEVATION .—



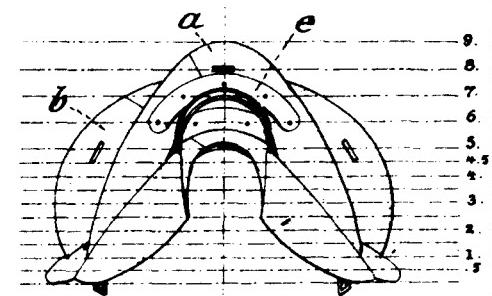
— PLAN [UPPER] .—



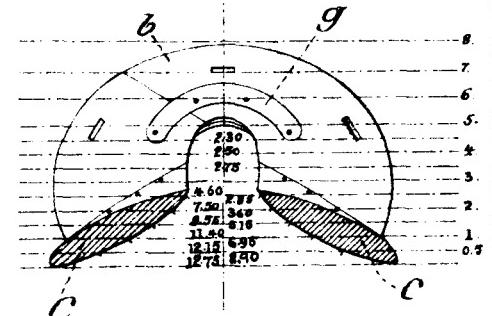
— PLAN [UNDER] .—



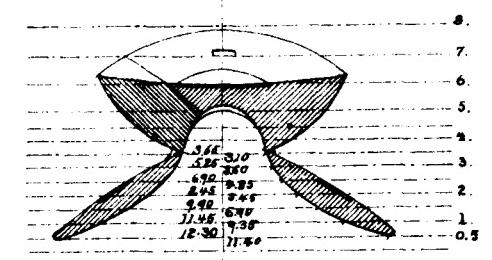
— FRONT ELEVATION .—



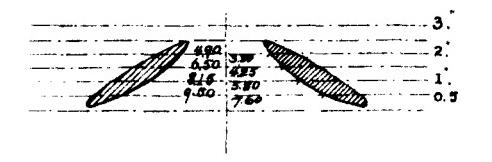
— SECTION ON EE' .—



— SECTION ON FF' .—



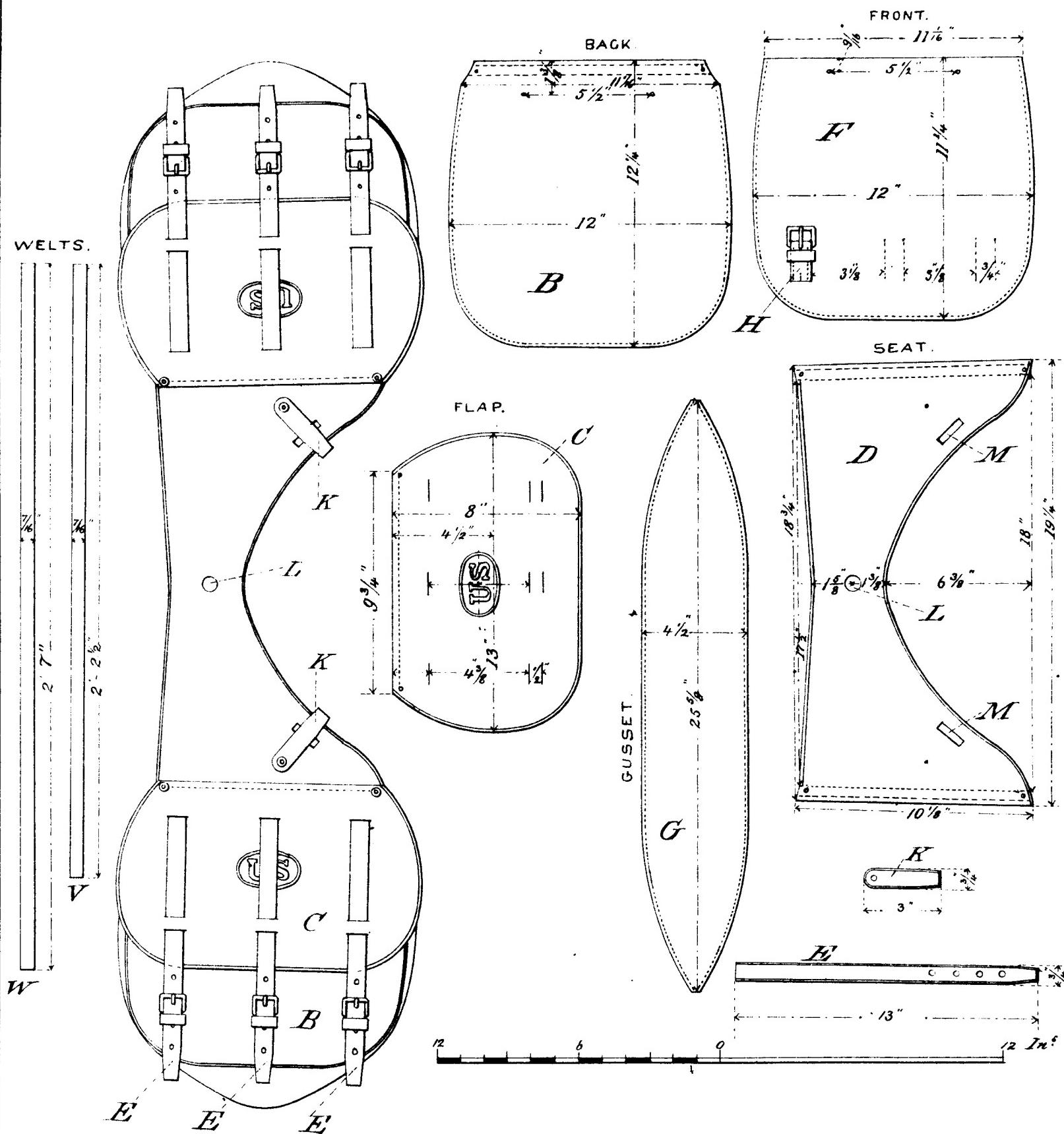
— SECTION ON DD' .—



10 5 0 10 Inches.

PLATE IV.

— SADDLE-BAG & DETAILS. —



1. — SADDLE-BAG, — LINING —

PLATE V.

2. — STIRRUP. —

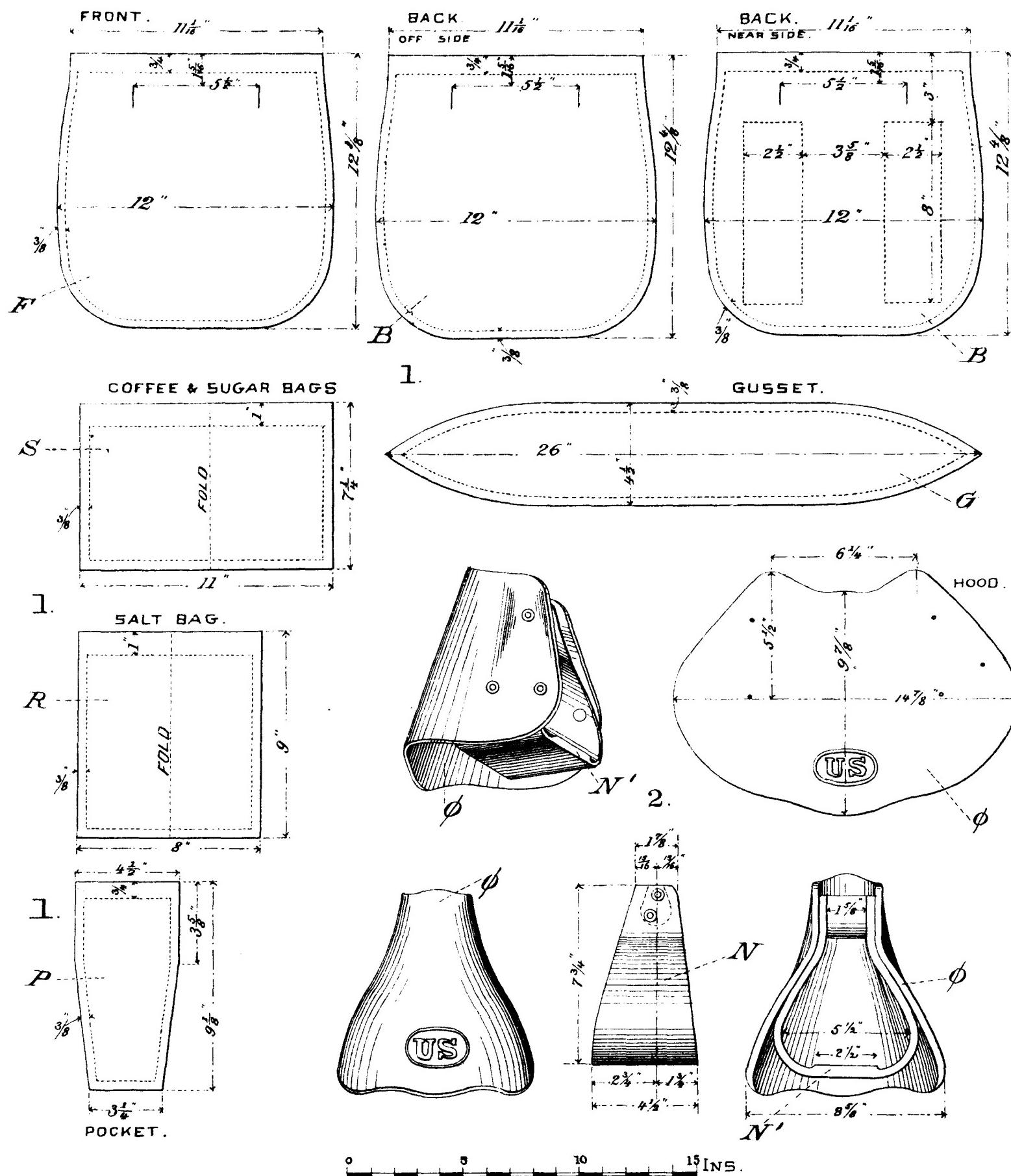
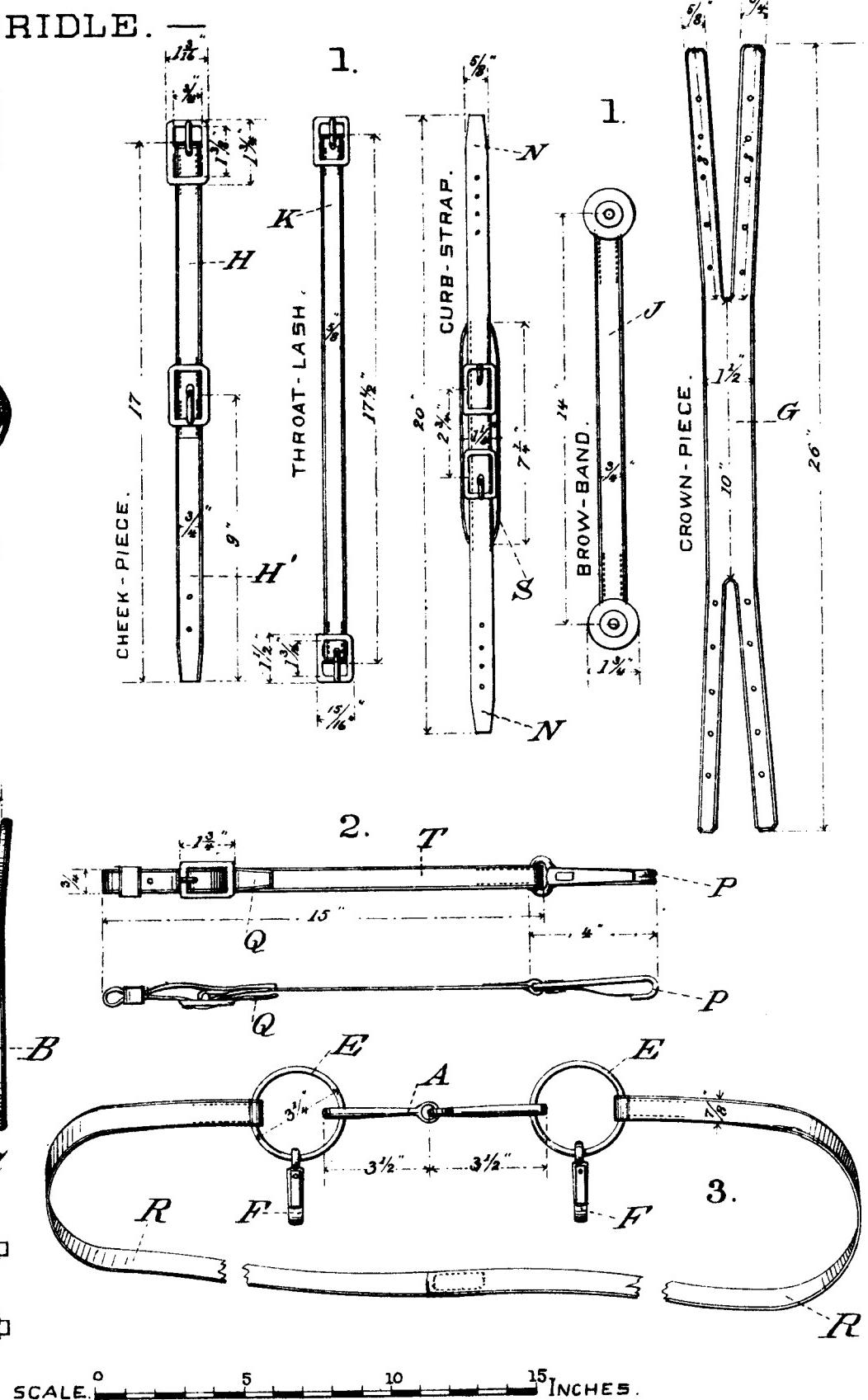
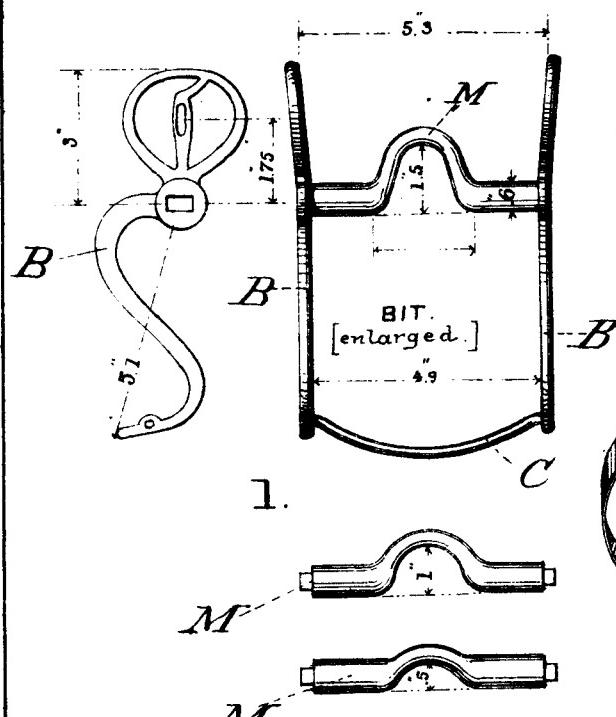
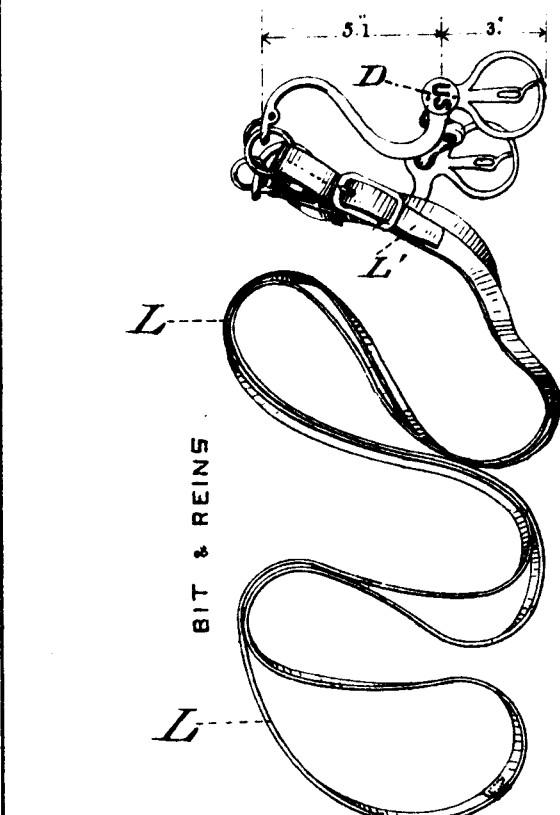


PLATE VI.

1. - CURB-BRIDLE. -

2. - LINK. -

3. - WATERING-BRIDLE. -



SCALE. 0 5 10 15 INCHES.

## PLATE VII.

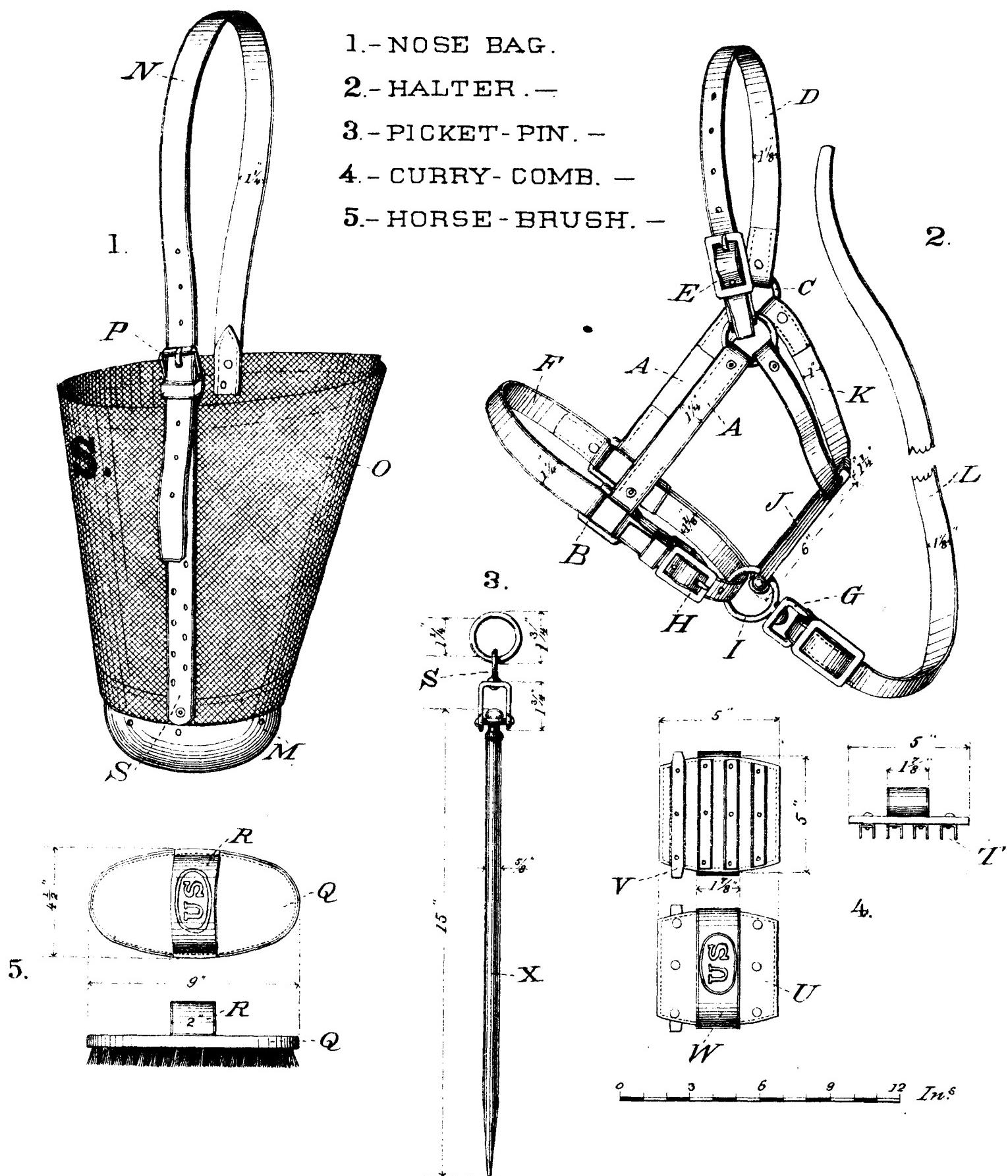


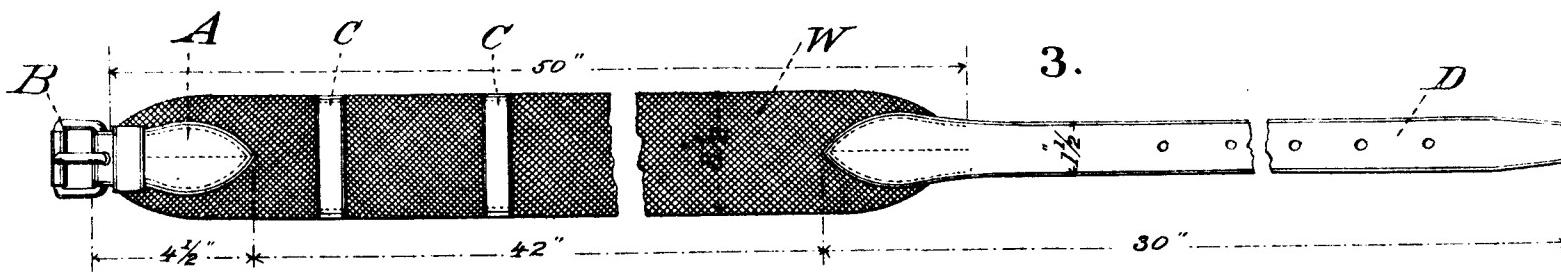
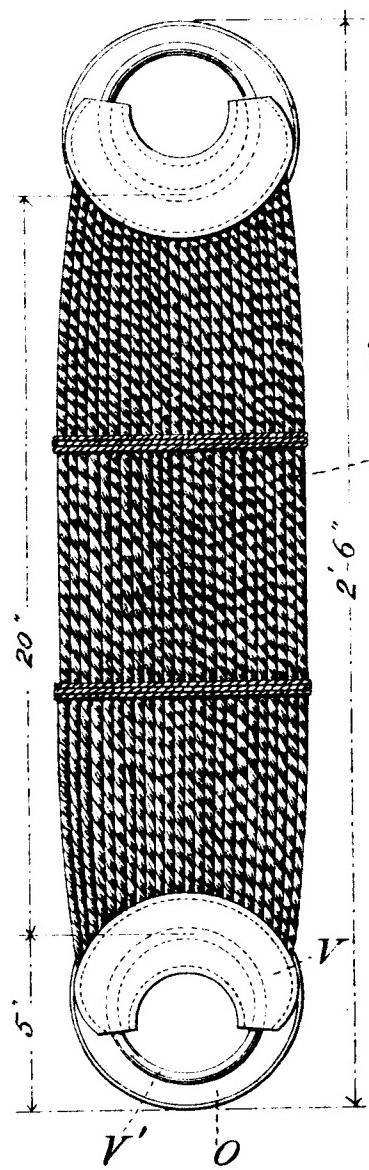
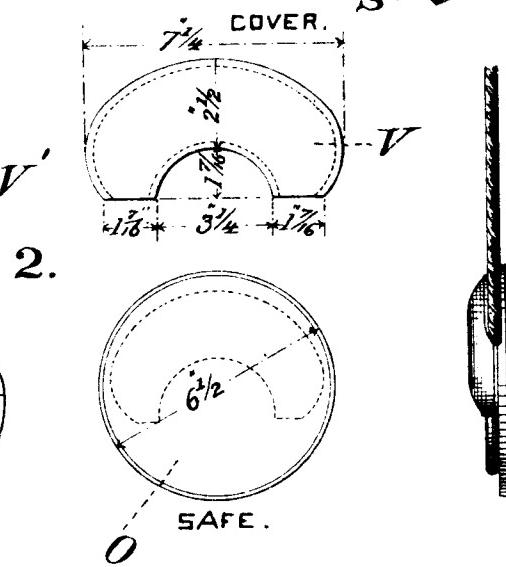
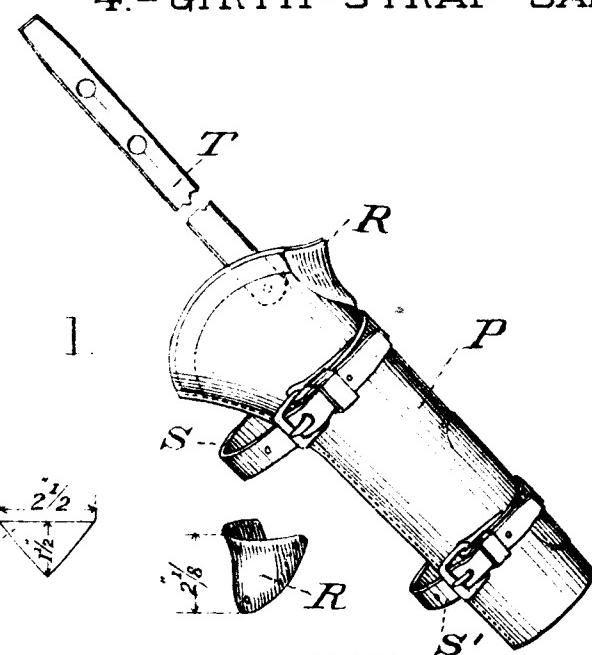
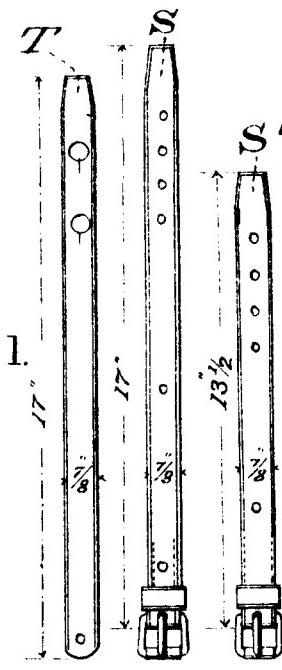
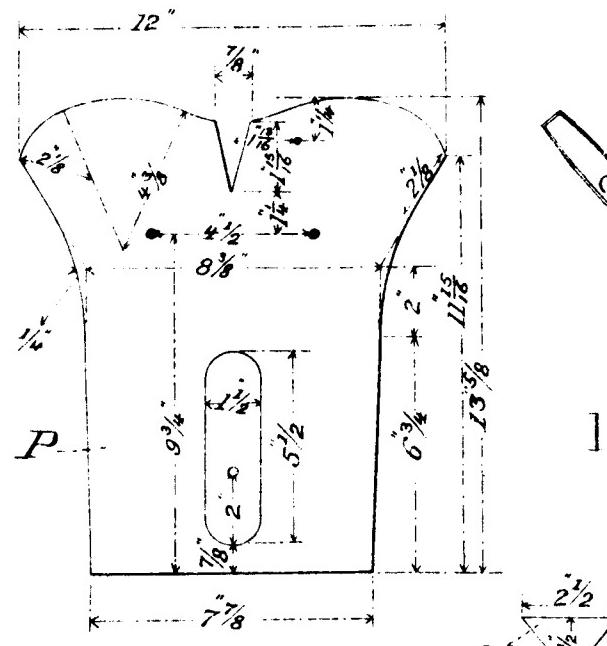
PLATE VIII.

1. - CARBINE-BOOT. -

2. - CINCHA. -

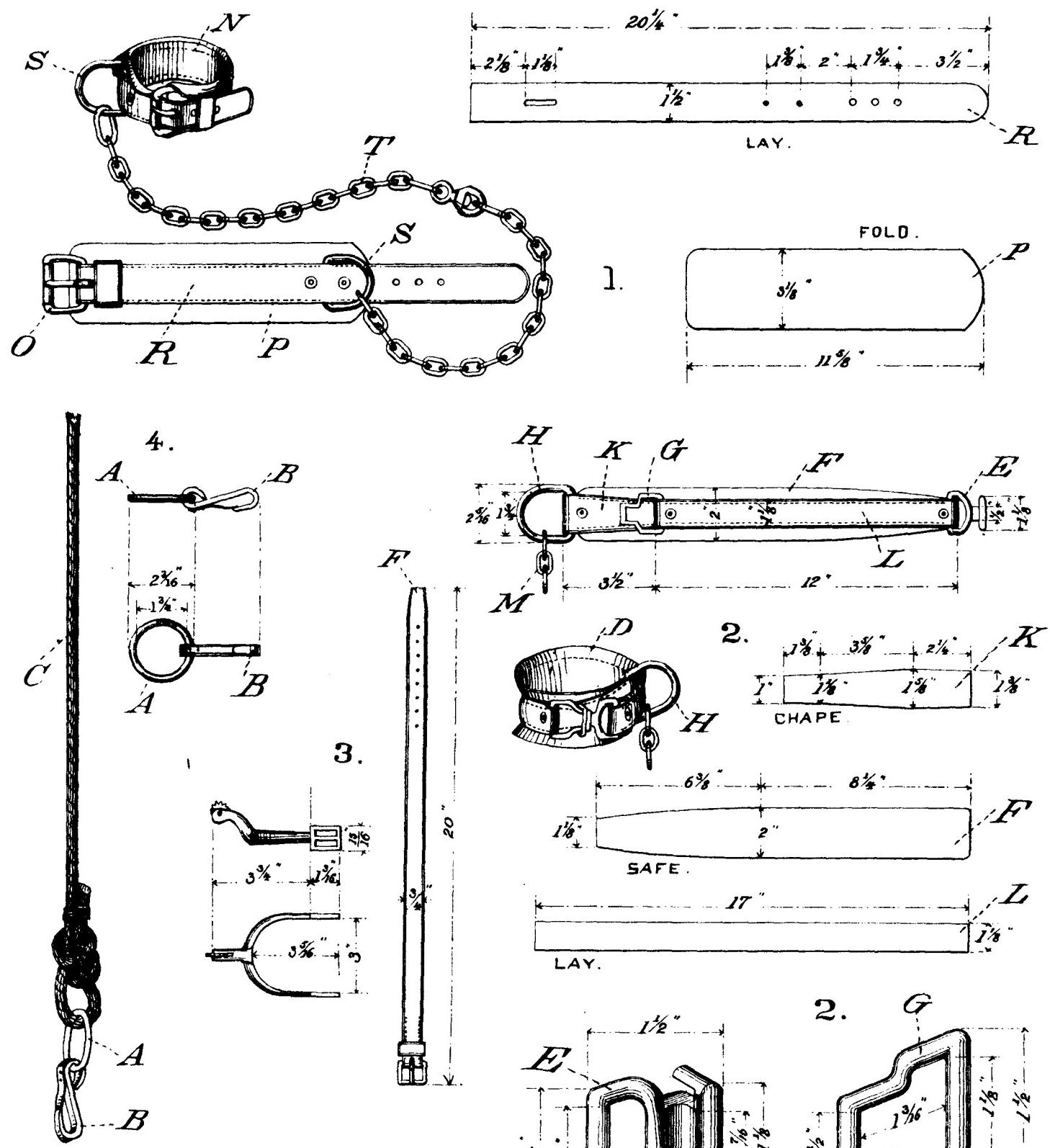
3. - SURCINGLE. -

4. - GIRTH-STRAP SAFE. -



Scale: 0 5 10 15 20 In.

## PLATE IX.

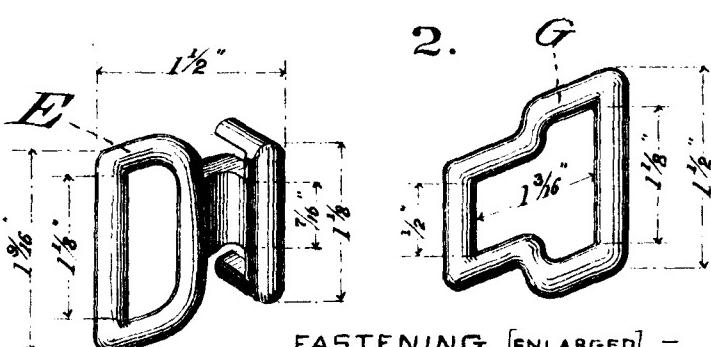


**1. - SIDE - LINE [COMLY] -**

## 2.- SIDE - LINE. [BUTLER-VARNEY ] -

### **3.- SPURS. —**

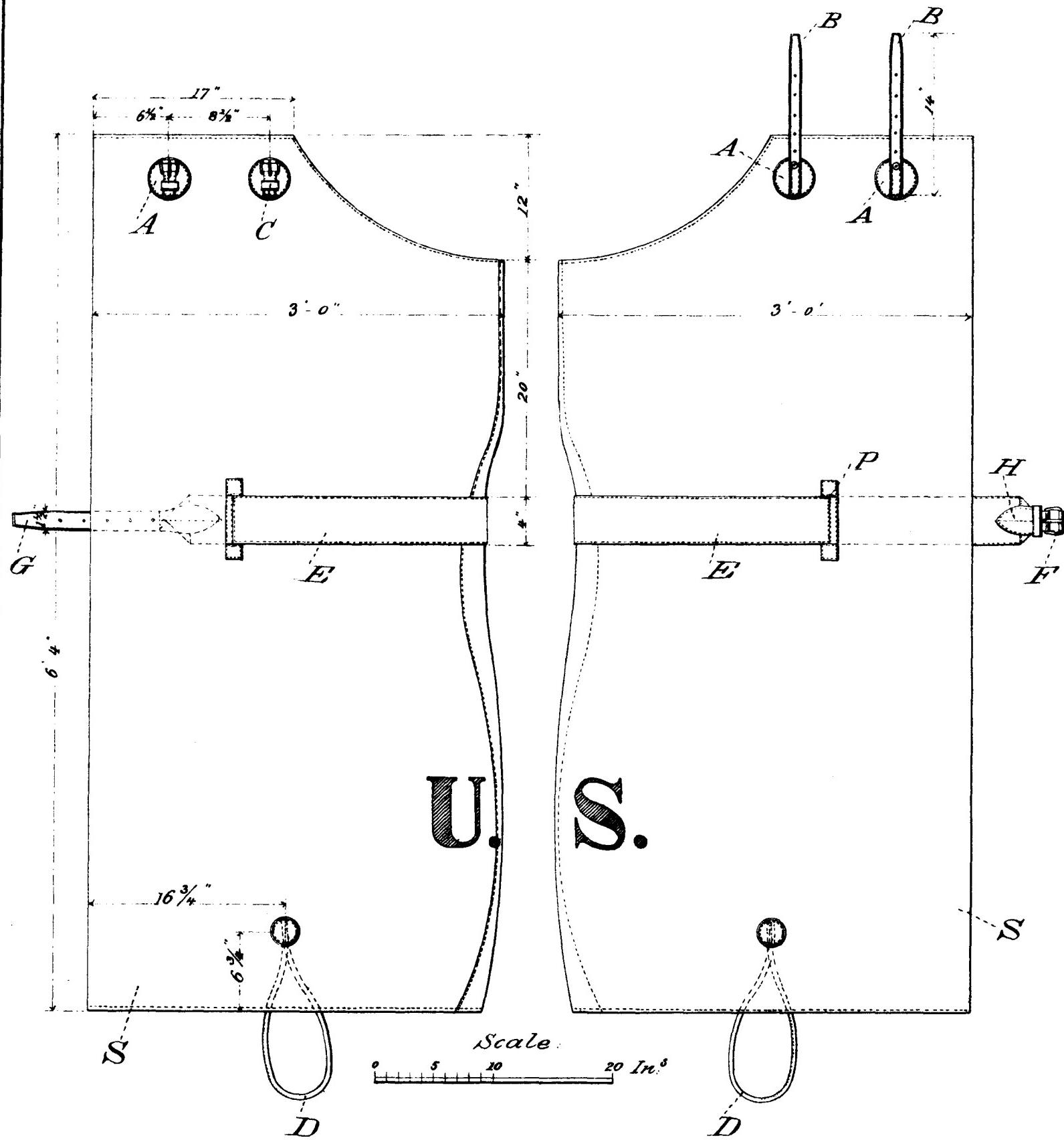
#### 4.-LARIAT. -



## FASTENING. [ENLARGED]. -

PLATE X.

— HORSE-COVER. —



— SADDLE-BLANKET. —

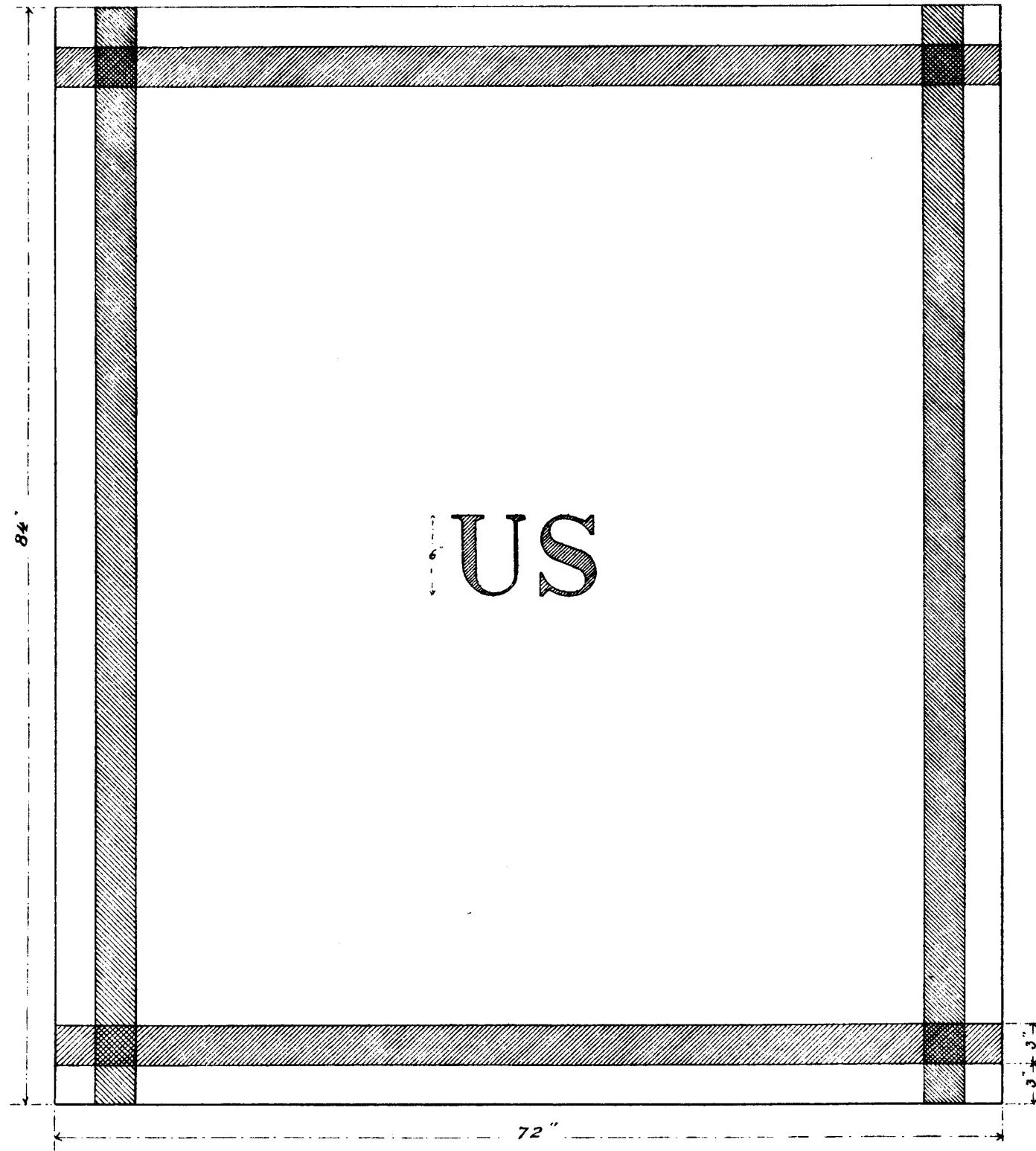
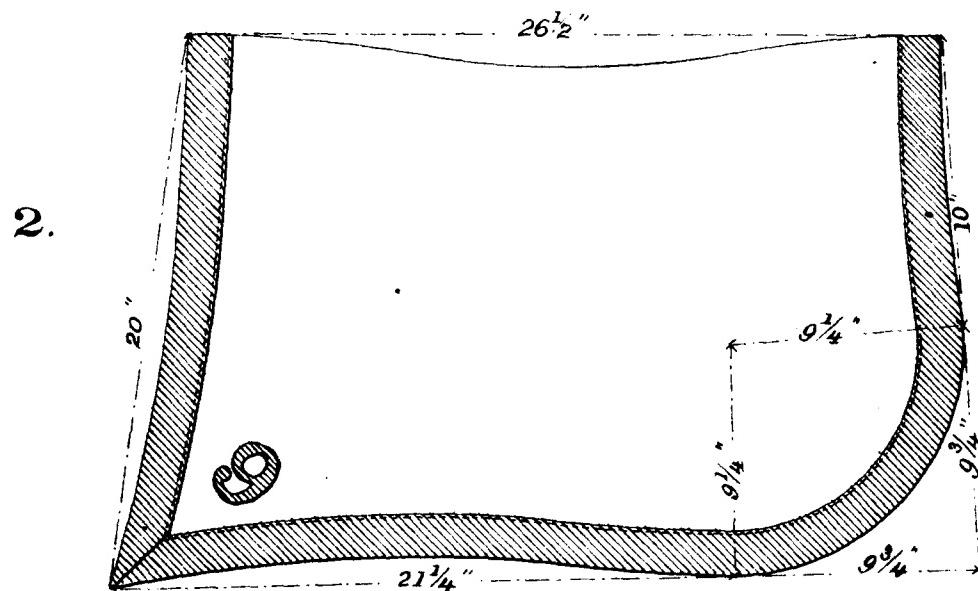
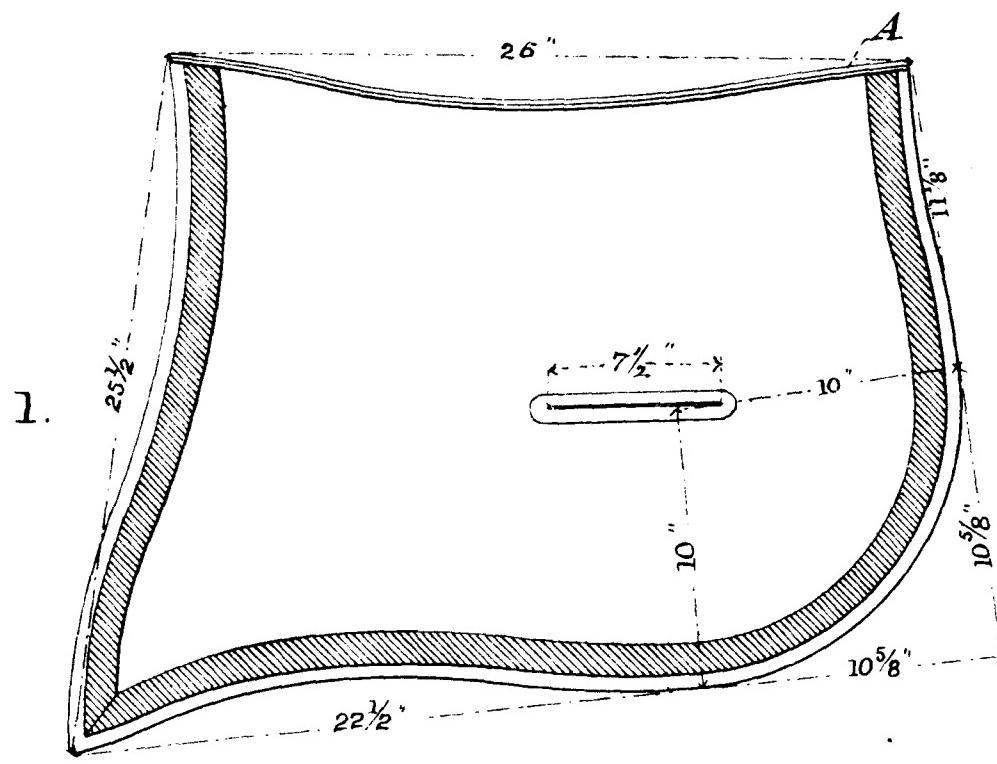


PLATE XII.

— SADDLE — CLOTHS. —

1.— FOR OFFICERS OF GEN'L STAFF & STAFF CORPS. —

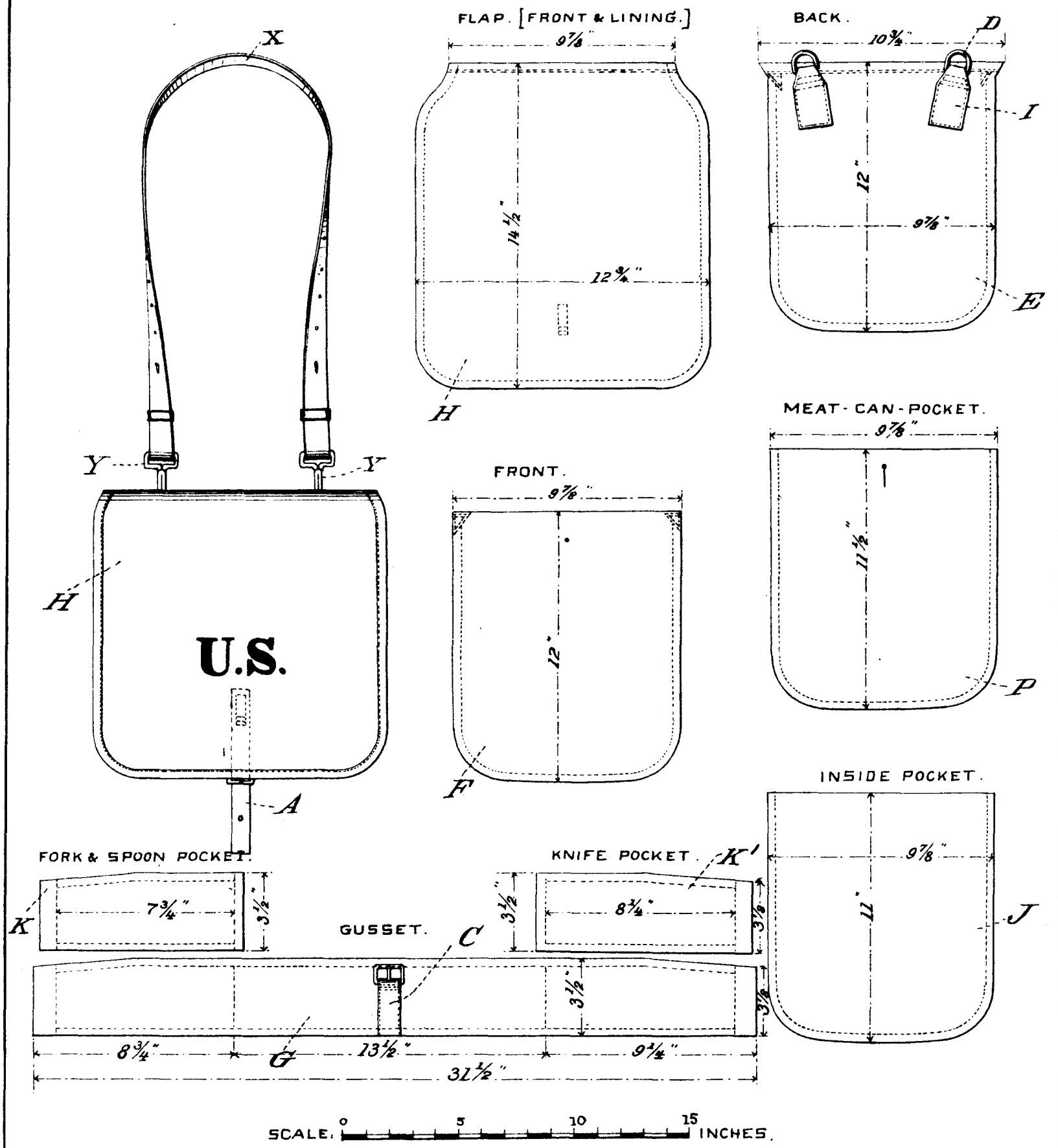
2.— FOR OFFICERS OF THE LINE. —



Scale: 0    5    10    15    20 In.

PLATE XIII.

— HAVERSACK. & DETAILS.—



1.- PISTOL-HOLSTER.—

PLATE XIV.

2.- SABRE-KNOT.—

3.- CARTRIDGE-BOX.—

4.- GUIDON-STIRRUP.—

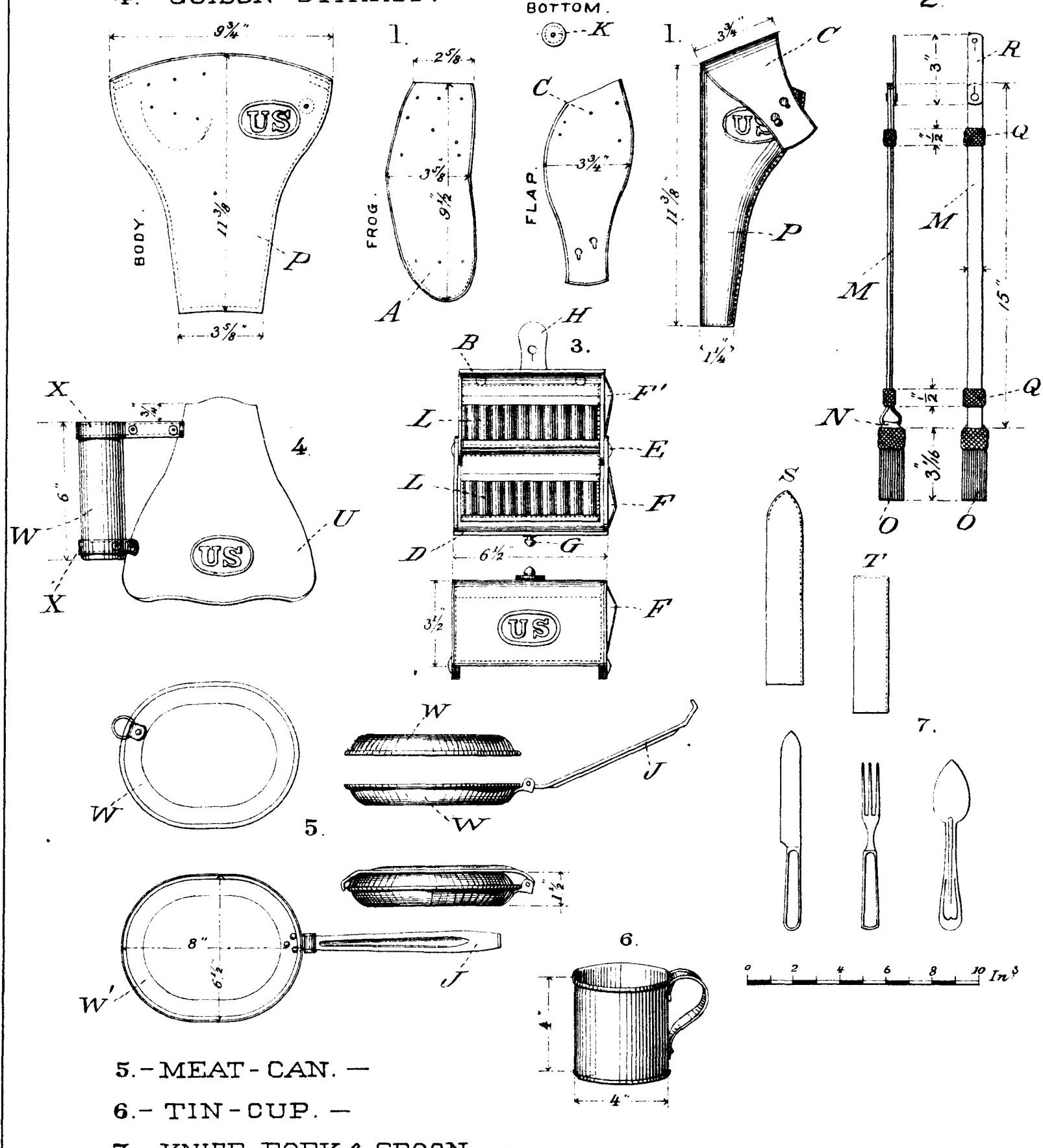


PLATE XV.

- |                      |                        |
|----------------------|------------------------|
| 1. CARTRIDGE - BELT. | 4. HAVERSACK - STRAP.  |
| 2. SABRE - BELT.     | 5. SABRE - ATTACHMENT. |
| 3. CARBINE - SLING.  | 6. CANTEEN.            |

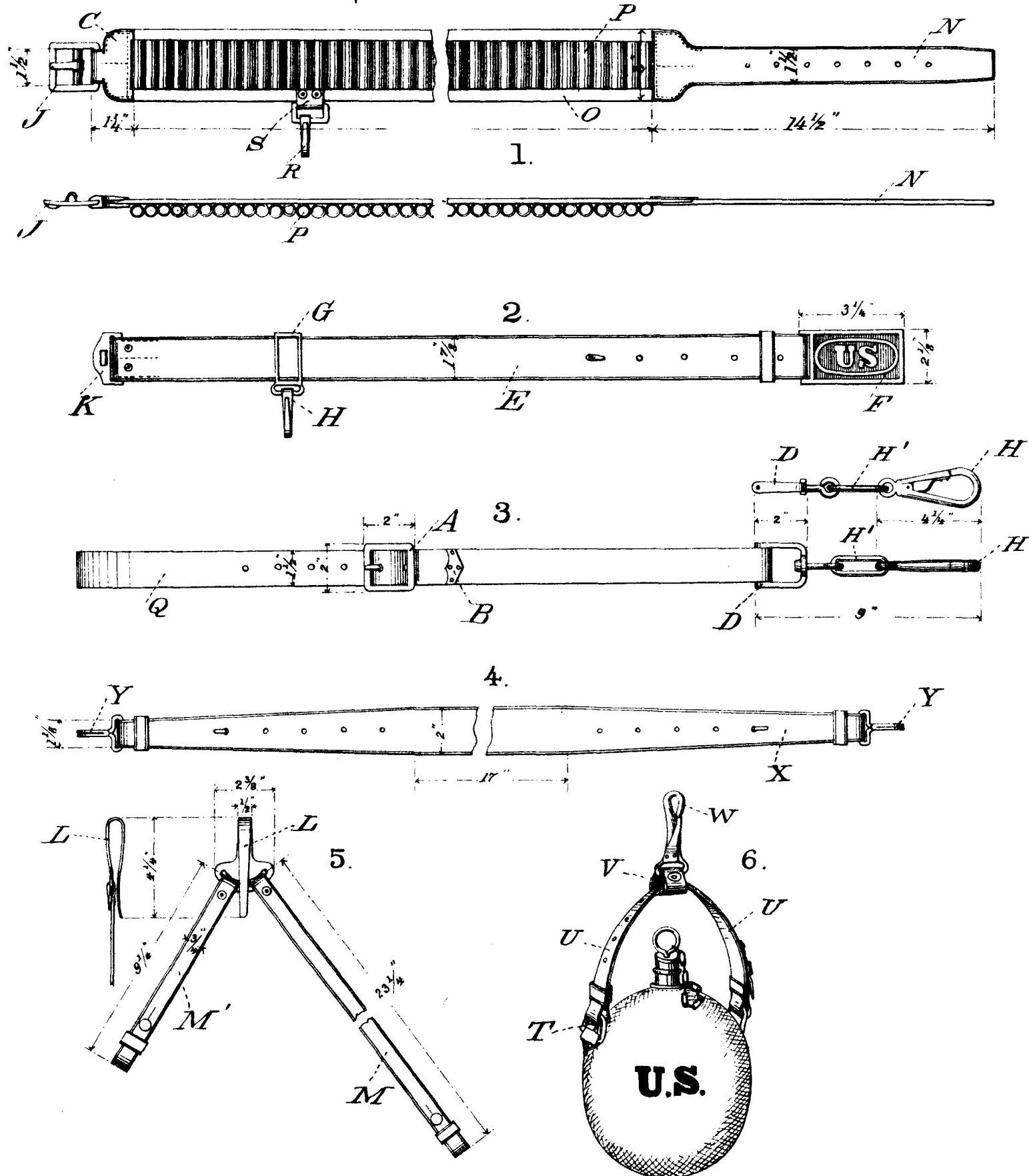
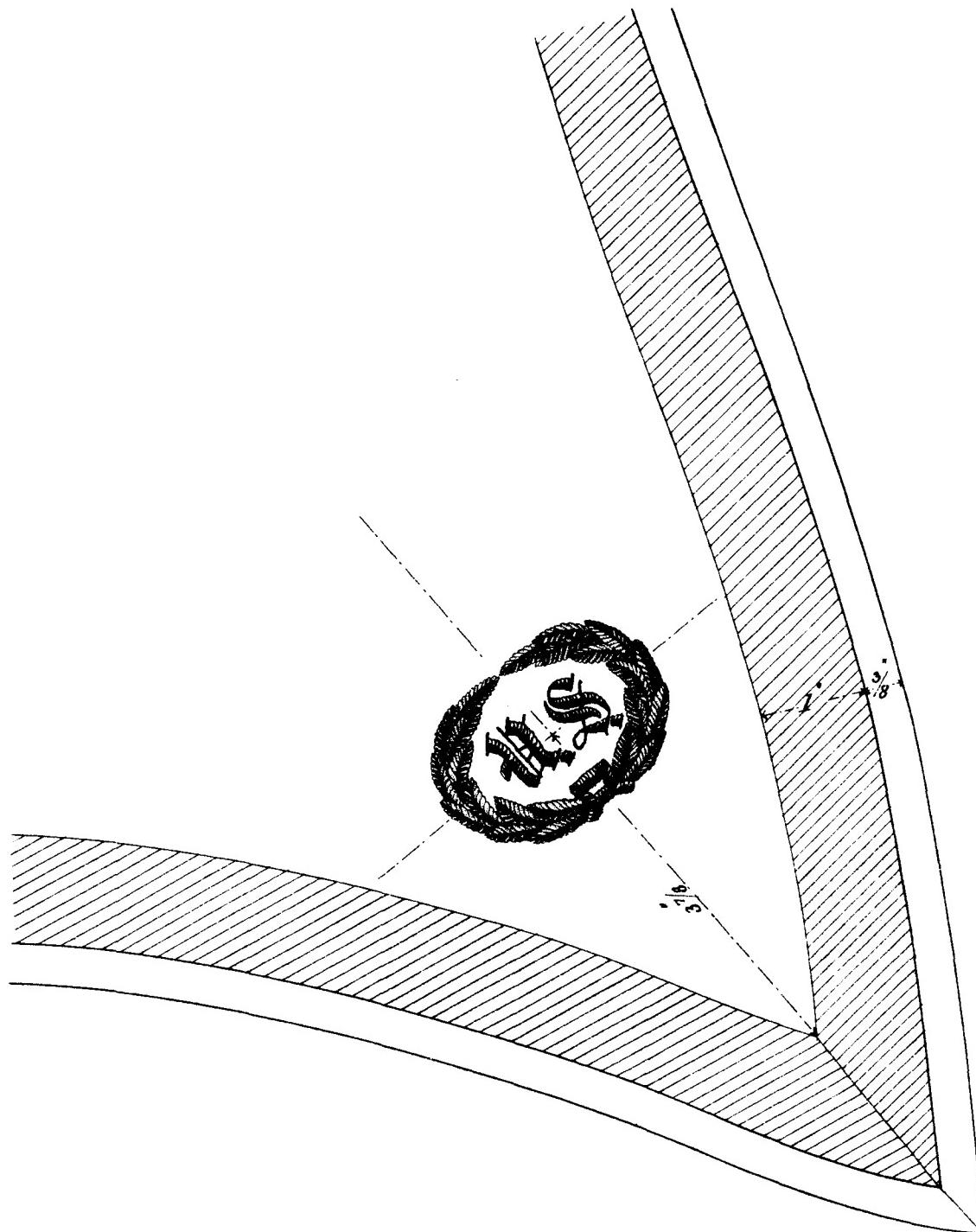


PLATE XVI.

— SADDLE - CLOTHS. —

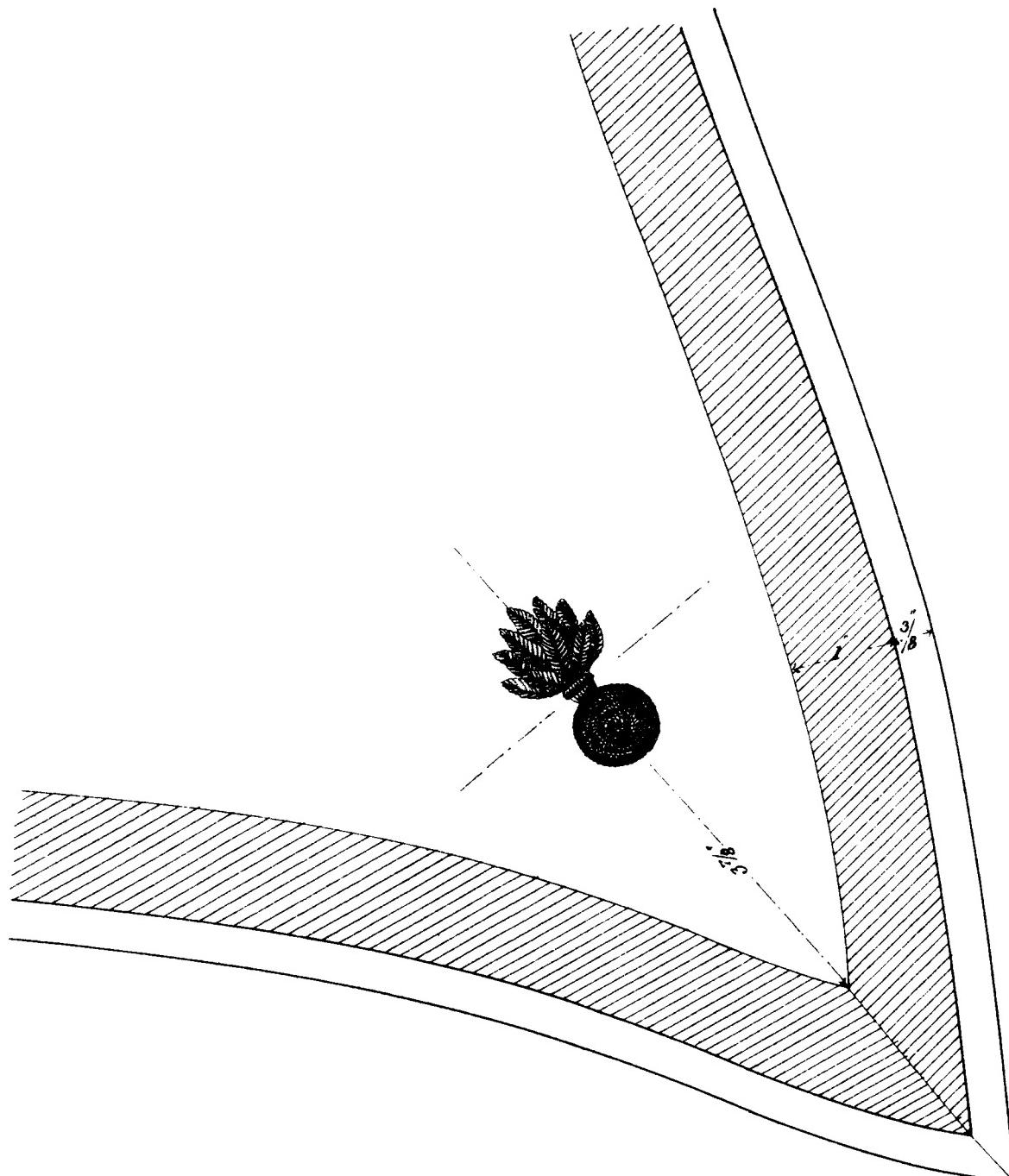
PLAN SHOWING THE POSITION OF THE INSIGNIA FOR  
OFFICERS OF GENERAL STAFF.



— SADDLE - CLOTHS. —

*PLAN SHOWING POSITION OF THE INSIGNIA  
FOR OFFICERS OF THE STAFF CORPS.*

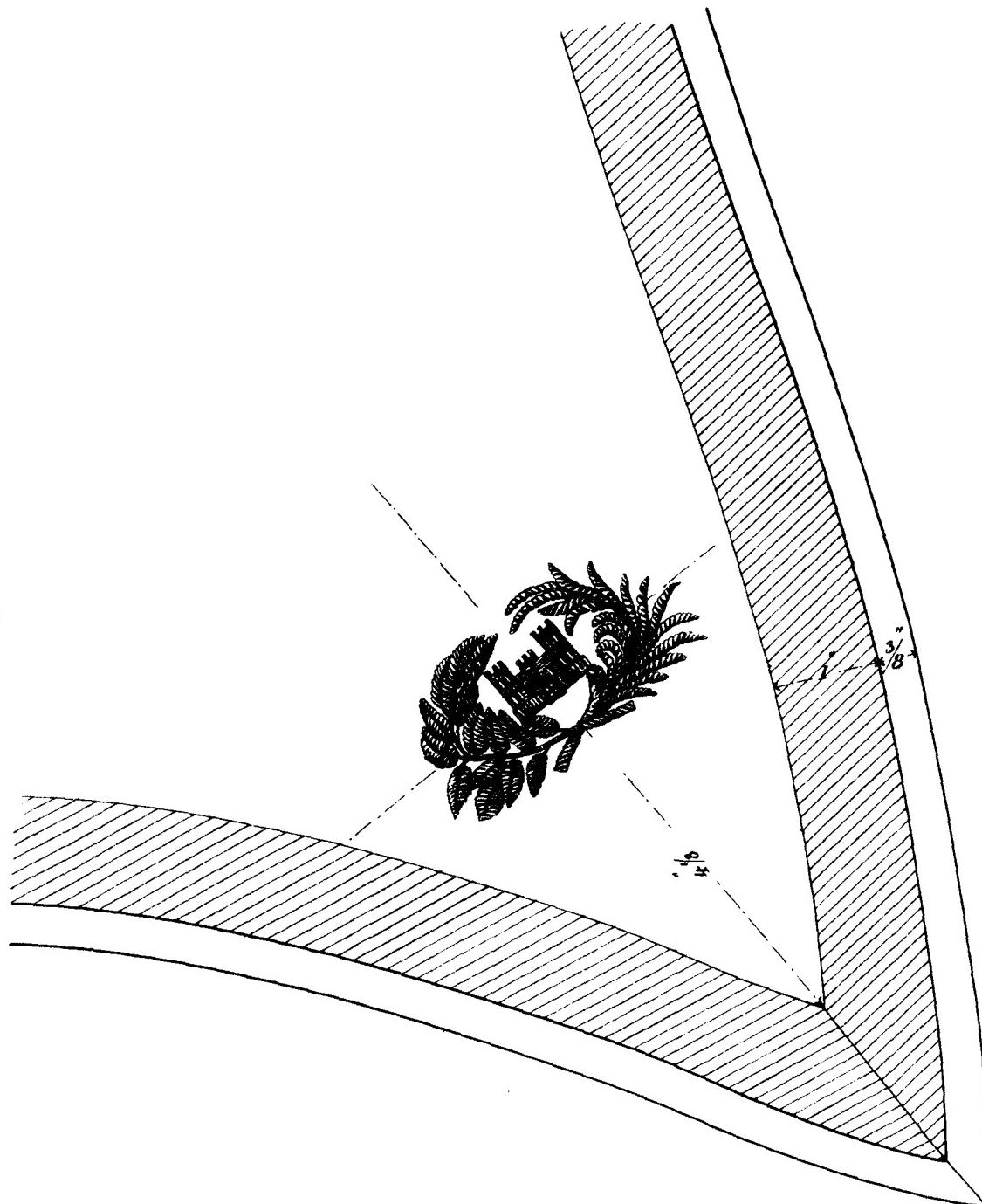
ORDNANCE DEPT.



— SADDLE - CLOTHS. —

PLAN SHOWING POSITION OF THE INSIGNIA  
FOR OFFICERS OF THE STAFF CORPS.

ENGINEER CORPS.



— SADDLE - CLOTHS. —

PLAN SHOWING POSITION OF THE INSIGNIA  
FOR OFFICERS OF THE STAFF CORPS.

SIGNAL CORPS.

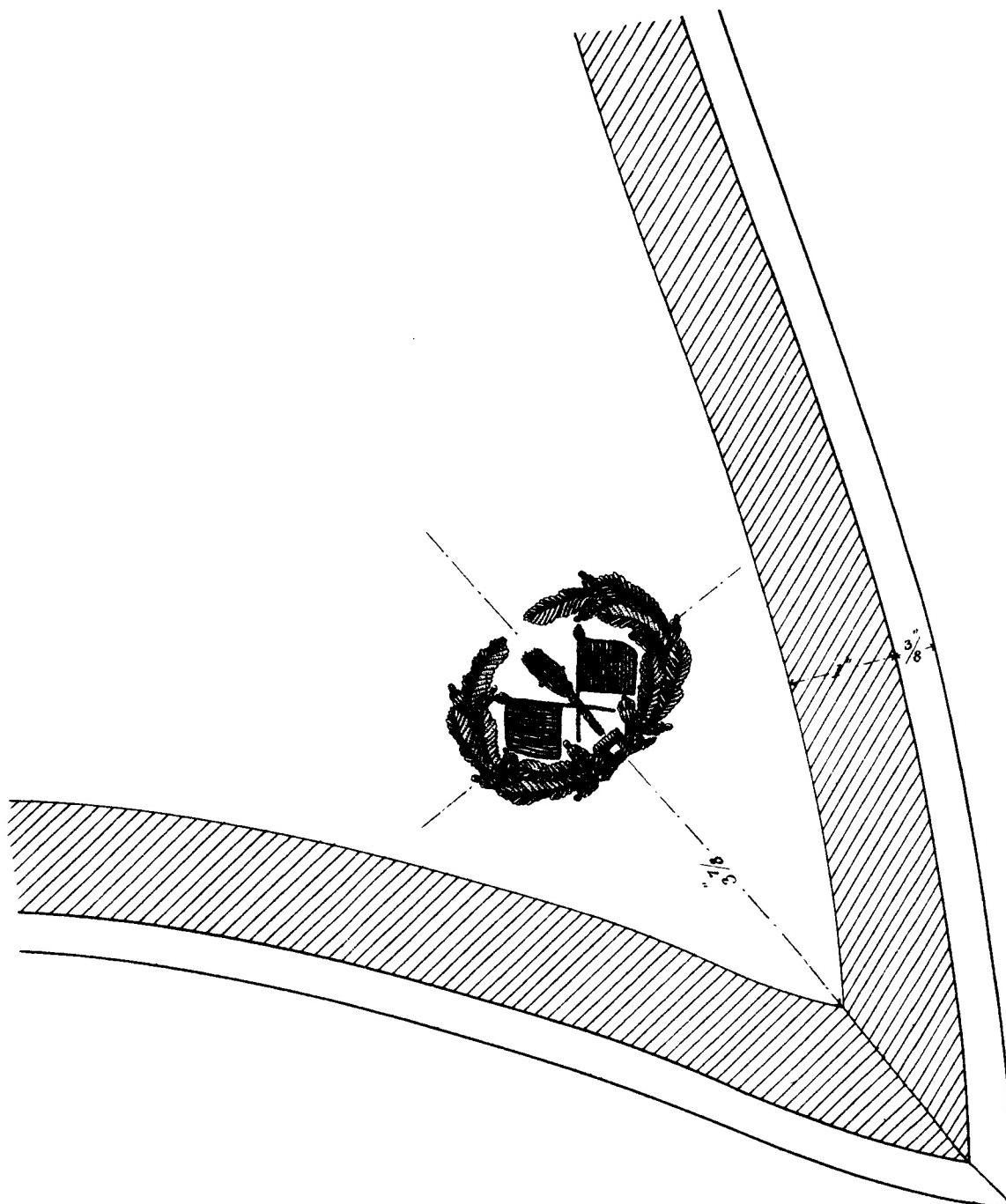


PLATE XX.

— SADDLE - CLOTHS . —

*PLAN SHOWING POSITION OF THE INSIGNIA  
FOR OFFICERS OF THE STAFF CORPS.*

ADJUTANT GENERAL'S DEP'T.

